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THE HISTORY OF ANTITRUST MARKET DELINEATION

GREGORY J. WERDEN*

INTRODUCTION

Market delineation is a critical stage in the structural analysis employed in many antitrust cases to help assess actual or potential market power.¹ Market delineation plays a central role in cases involving mergers and acquisitions challenged under Section 7 of the Clayton Act² and in many cases arising under Sections 1 and 2 of the Sherman Act.³ This Article

* Economist, Antitrust Division, U.S. Department. The views expressed herein are not purported to reflect those of the U.S. Department of Justice. The discussion benefitted from comments by Morris Adelman, Frederick Rowe, and especially Phillip Areeda.

1. U.S. Dep't of Justice Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶ 13,103 (June 14, 1984) [hereinafter 1984 Merger Guidelines] define market power as the "ability of one or more firms profitably to maintain prices above the competitive levels for a significant period of time." *Id.* § 1.0; see also *FTC v. Promodes S.A.*, 1989-2 Trade Cas. (CCH) ¶ 68,688, at 61,625 (N.D. Ga. 1989). For similar definitions, see *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 27 n.46 (1984); *Flip Side Prods., Inc. v. Jam Prods., Ltd.*, 843 F.2d 1024, 1032 (7th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989); see also *United States v. Archer-Daniels-Midland Co.*, 866 F.2d 242, 246 (8th Cir. 1989); William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 HARV. L. REV. 937, 937 (1981).

Antitrust case law uses the term "monopoly power" more often than the term "market power." "Monopoly power" is most usefully defined as "a high degree of market power." Landes & Posner, *supra*, at 937. This is a refinement of the traditional legal definition: "Monopoly power is the power to control prices or exclude competition." *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377, 391 (1956).

2. See, e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 335 (1962) ("[T]he proper definition of the market is a 'necessary predicate' to an examination of competition that may be affected by the horizontal aspects of [a] merger."); see also *United States v. Marine Bancorporation*, 418 U.S. 602, 618 (1974) (similar for potential competition mergers); *United States v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586, 593 (1957) (same for vertical mergers).

Section 7 of the Clayton Act, 15 U.S.C. § 18 (1988), prohibits mergers and acquisitions the effect of which "may be substantially to lessen competition . . . in any line of commerce . . . in any section of the country."

3. Section 2 of the Sherman Act, 15 U.S.C. § 2 (1988), prohibits monopolization, attempts to monopolize, and conspiracies to monopolize. Market delineation plays an important part in cases involving either of the former two allegations. See *United States v. Grinnell Corp.*, 384 U.S. 563, 570 (1966) (stating that one element of the "offense of monopoly under § 2 of the Sherman Act [is] the possession of monopoly power in the relevant market"); *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 177 (1965) ("Without a definition of [the] market there is no way to measure [the defendant's] ability to lessen or destroy competition.").

Section 1 of the Sherman Act, 15 U.S.C. § 1 (1988), prohibits agreements that unreasonably restrain trade, including certain vertical restraints. Market delineation plays an important part in cases involving vertical restraints. See *Continental T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 45 (1977) (nonprice vertical restraints assessed under the Rule of Reason "in light of the competi-

presents a history of antitrust market delineation, with special focus on merger analysis.⁴

This is an appropriate time for historical reflection on antitrust market delineation because last year was an important anniversary for three milestones in the history of antitrust market delineation. It was the fortieth anniversary of the first explicit articulation in the economic or legal literature of cross-elasticity of demand as the test for market delineation.⁵ It was the thirtieth anniversary of *Brown Shoe Co. v. United States*,⁶ the most often cited Supreme Court case on market delineation. Finally, it was the tenth anniversary of the promulgation of new Merger Guidelines by the United States Department of Justice,⁷ which ushered in a new era of antitrust market delineation.⁸

For the most part, the discussion proceeds chronologically. Section I begins with a brief prehistory of antitrust market delineation, covering the period through 1950. It then traces the emergence of market delineation and the development of the cross-elasticity-of-demand test between 1952 and 1955. Section I concludes with the Supreme Court's landmark decision in *United States v. E.I. du Pont de Nemours & Co.* (the *Cellophane* case).⁹ Section II discusses the case law and commentary that emerged between the

tive situation in 'the product market as a whole'"); *Jefferson Parish Hosp.*, 466 U.S. at 13-14, 17 (tying is per se illegal if the seller has market power over the tying product); *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 611 (1953) (in tying cases, market power is assessed in "the whole and not part of a relevant market").

4. Nonmerger cases are cited and occasionally discussed below because market delineation principles and precedents are used interchangeably in merger and nonmerger cases. See *infra* note 303 and accompanying text.

5. See *infra* notes 38-47 and accompanying text.

6. 370 U.S. 294 (1962).

7. These Merger Guidelines were released on June 14, 1982. See U.S. Dep't of Justice, Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶ 13,102 (June 14, 1982) [hereinafter 1982 Merger Guidelines]. They replaced guidelines which were released on May 30, 1968. See *id.* ¶ 13,101 (May 30, 1968) [hereinafter 1968 Merger Guidelines]. A slightly revised version of the 1982 Guidelines was released on June 14, 1984. See 1984 Merger Guidelines, *supra* note 1; see *infra* notes 332-42 and accompanying text for a discussion of the 1968 Merger Guidelines and notes 449-516 and accompanying text for a discussion of the 1982 and 1984 Merger Guidelines; see also U.S. Dep't of Justice Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶ 13,104 (April 2, 1992) [hereinafter 1992 Merger Guidelines].

A more extensive revision of the Merger Guidelines was released on April 2, 1992. See *infra* notes 450, 456-58, 462 & 562 for references to this latest revision.

8. See *infra* notes 517-40 and accompanying text.

9. 351 U.S. 377 (1956). This case will be referred to throughout the remainder of this Article as the *Cellophane* case. It should not be confused with the Supreme Court's decision a year later involving the same parties. Compare *United States v. E.I. du Pont de Nemours & Co.*, 353 U.S. 586 (1957) (the *du Pont-General Motors* case), *supra* note 2, with *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956) (the *Cellophane* case), *supra* note 1; see also *infra* note 92.

Cellophane case and *Brown Shoe*, concentrating on market delineation in merger cases. Section III considers *Brown Shoe* and relevant Supreme Court cases between 1962–70. Featured as well is market delineation under the original 1968 Merger Guidelines. Section IV discusses relevant cases in the lower courts, particularly those applying *Brown Shoe*, and the scholarly literature on market delineation between 1962 and 1982. Section V presents the 1982 Merger Guidelines' approach to market delineation and compares and contrasts that approach with the prior case law and scholarly literature. Also discussed are the major criticisms of the Guidelines' approach. Section VI discusses the post-1982 Guidelines' case law and briefly reviews empirical approaches to market delineation advocated over the past twenty years. The final section contains a few concluding words.

Much of the intellectual development of the concepts relating to antitrust market delineation took place in classrooms and seminar halls at law schools and economics departments,¹⁰ in judges' chambers, and in the offices of enforcement agencies, law firms, and economic consultants. The written record of reported case decisions, articles, and books incompletely reflects this development. Thus, it is often impossible to assign credit, or blame, to those who deserve it. I apologize in advance to those I may slight.

I. ANTITRUST MARKET DELINEATION THROUGH THE CELLOPHANE CASE

A. A Prehistory of Antitrust Market Delineation

In economics, the notion of a market—or “industry” as economists have often termed it¹¹—was fairly well developed before there were any antitrust laws. In 1942, George Stigler expressed the classical economic notion: “A market for a commodity is the area within which the price tends to uniformity, allowance being made for transportation costs”¹² Stigler was paraphrasing Alfred Marshall's path-breaking *Principles of Eco-*

10. In the late 1940s and 1950s, a critical period in the development of the concepts involved in antitrust market delineation, active discussions of antitrust matters occurred at the University of Chicago Law School under the leadership of Aaron Director and Henry Simons and also at Harvard University's Department of Economics under the leadership of Edward S. Mason. Participants published many articles, but those articles are unlikely to reflect fully the insights on market delineation that came out of these discussions. The concepts in many court opinions surely migrated to the courts from Chicago and Harvard via law clerks.

11. Some economists have distinguished between a “market” and an “industry.” John Nightingale, *On the Definition of 'Industry' and 'Market,'* 27 J. INDUS. ECON. 31 (1978); Joan Robinson, *The Industry and the Market*, 66 ECON. J. 360 (1956). The distinctions are not important for present purposes.

12. GEORGE J. STIGLER, *THE THEORY OF COMPETITIVE PRICE* 92 (1942).

nomics,¹³ originally published in 1890, and Marshall was elaborating on the work of Augustin Cournot.¹⁴ The idea behind this definition is that trade occurs freely throughout a market, so actual or potential arbitrage precludes price differentials exceeding transportation costs. Until fairly recently, however, it does not appear that any economists attempted to convert this single-price property of a market into a test for antitrust market delineation.¹⁵

Among economists, there actually has been a tradition of hostility to reliance on market shares in assessing market power and thus a tradition of hostility toward the whole idea of antitrust market delineation.¹⁶ Hostility to market delineation was particularly intense from the early 1930s to the mid-1950s, when the new theories of "monopolistic competition" were popular. Those theories revolved around the idea that significant differentiation among products made every seller a monopolist, in at least a limited sense, over its particular product.¹⁷

Joan Robinson, one of two leading proponents of the monopolistic competition theories, argued that the classical concept of an industry generally did not correspond very closely to the real world. She went on to add:

But in some cases, where a commodity in the real world is bounded on all sides by a marked gap between itself and its closest substitutes, the real-world firms producing this real-world commodity will con-

13. ALFRED MARSHALL, *PRINCIPLES OF ECONOMICS* 325 (8th ed. 1920) (originally published in July 1890, the month in which the Sherman Act was signed into law).

14. AUGUSTIN COURNOT, *RESEARCHES INTO THE MATHEMATICAL PRINCIPLES OF THE THEORY OF WEALTH* 51-52 (Nathaniel T. Bacon trans., Augustus H. Kelley reprint, 1971) (1838).

15. Over the last 20 years, economists have gone back to their roots and proposed empirical methods for market delineation based on this notion. See Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation in Antimerger Suits*, 18 ANTITRUST BULL. 45 (1973) (proposing a method based on shipments data); George J. Stigler & Robert A. Sherwin, *The Extent of the Market*, 28 J.L. & ECON. 555 (1985) (proposing a method based on price data).

16. The first substantial discussion of monopoly power in the economic literature cautioned that market shares and concentration are not necessarily good indicators of market power. See Abba P. Lerner, *The Concept and Measurement of Monopoly Power*, 1 REV. ECON. STUD. 157, 166 (1934). In two classic law review articles, economist Edward S. Mason made essentially the same point in addressing the reliance on market shares in antitrust cases. See Edward S. Mason, *The Current Status of the Monopoly Problem in the United States*, 62 HARV. L. REV. 1265, 1274 (1949); Edward S. Mason, *Monopoly in Law and Economics*, 47 YALE L.J. 34, 47-48 (1937). Another economist familiar with antitrust law added that market shares "may be arbitrarily enhanced or reduced by redefinition of the industry." CORWIN D. EDWARDS, *MAINTAINING COMPETITION* 124-25 (1949).

17. See EDWARD H. CHAMBERLIN, *THE THEORY OF MONOPOLISTIC COMPETITION* (8th ed. 1948) (originally published in 1933); JOAN ROBINSON, *THE ECONOMICS OF IMPERFECT COMPETITION* (2d ed. 1969).

form to the definition of an industry sufficiently closely to make the discussion of industries in this technical sense of some interest.¹⁸

Edward Chamberlin, the other leading proponent of the monopolistic competition theories, went much further than Joan Robinson in attacking the concept of an industry. He argued:

"Industry" or "commodity" boundaries are a snare and a delusion—in the highest degree arbitrarily drawn, and, wherever drawn, establishing at once wholly false implications both as to competition of substitutes within their limits, which supposedly stops at their borders, and as to the possibility of ruling on the presence or absence of oligopolistic forces by the simple device of counting the number of producers included.¹⁹

There were economists who disagreed with Robinson and Chamberlin,²⁰ but they were less influential until roughly the late 1950s, and they generally did not make any contributions to antitrust market delineation.

One notable early contribution²¹ was an idea expressed by perhaps the three most eminent economists in the field of economics concerned with antitrust—industrial organization. That idea was offered in response to the

18. ROBINSON, *supra* note 17, at 17. Mrs. Robinson's view continues to have its adherents. E.g., Richard Schmalensee, *Another Look at Market Power*, 95 HARV. L. REV. 1789, 1799–800 (1982).

19. Edward H. Chamberlin, *Product Heterogeneity and Public Policy*, 40 AM. ECON. REV. (PAPERS & PROC.) 85, 86–87 (1950); accord CHAMBERLIN, *supra* note 17, at 201; ROBERT TRIFEN, *MONOPOLISTIC COMPETITION AND GENERAL EQUILIBRIUM THEORY* 78–89 (1940). Some economists continue to believe that market delineation is an artificial construction created by antitrust litigation, drawing a "meaningless" distinction between firms that are in and out of the market. E.g., Franklin M. Fisher, *Horizontal Mergers: Triage and Treatment*, 1 J. ECON. PERSPECTIVES 23, 27 (1987).

There is merit to this view. Delineated markets rarely, if ever, consist of a single homogeneous product, produced at a single location, and for which there are no substitute products or locations just outside the market. Nevertheless, a structural merger policy—built on market delineation and market shares—finds support in economic theory and empirical research, and, in industries with relatively undifferentiated products, a structural approach to mergers is probably the best we can do given our current state of knowledge. See George A. Hay & Gregory J. Werden, *Horizontal Mergers: Law, Policy and Economics*, 83 AM. ECON. REV. (PAPERS & PROC.) 173, 176 (1993). Differentiated products industries, however, present quite a different situation, and a combination of estimation and simulation is likely to offer a far better prediction of the competitive effects of a merger. *Id.* at 176–77.

20. E.g., FRITZ MACHLUP, *THE ECONOMICS OF SELLERS' COMPETITION* 213–14 (1952); GEORGE J. STIGLER, *THE THEORY OF PRICE* 210–12 (2d ed. 1946); Clair Wilcox, *Discussion*, 40 AM. ECON. REV. (PAPERS & PROC.) 85, 86–87 (1950) ("Whatever the theoretical difficulties, criteria for the guidance of policy must and will be devised, if not by the economist, then by the lawyer and the engineer. If economics does not eventually contribute to the task, then so much the worse for economics.").

21. Perhaps another notable contribution was the general notion that substitute goods should be in the same market. This notion was expressed in discussions concerning the definition of industries for statistical purposes. See G. WARREN NUTTER, *THE EXTENT OF ENTERPRISE MO-*

assault on the market concept, which was part of the monopolistic competition revolution. The idea was that the market for any firm consists of the group of firms it views as its significant competitors.

As expressed by Edward S. Mason, who is generally credited with founding the field of industrial organization:

The market and market structure must be defined with reference to the position of a single seller or buyer. The structure of a seller's market, then, includes all those considerations which he takes into account in determining his business policies and practices. His market includes all buyers and sellers, of whatever product, whose action he considers to influence his volume of sales.²²

Similar views were expressed by Mason's student Joe Bain,²³ who was generally considered Mason's successor as the leading industrial organization economist, and by George Stigler,²⁴ the only industrial organization economist to win a Nobel Prize.

The case law has not hesitated to delineate markets and rely, to a significant extent, on market shares. The notion of a relevant market is at least implicit in the early monopolization cases.²⁵ Such cases, however, barely mention the underlying substitutability issues that are the concern of market delineation.²⁶ The analysis of these cases probably was not very sensi-

NOPOLY IN THE UNITED STATES, 1899-1939, at 12-14 (1951); Clair Wilcox, *On the Alleged Ubiquity of Oligopoly*, 40 AM. ECON. REV. (PAPERS & PROC.) 67, 69 (1950).

22. Edward S. Mason, *Price and Production Policies of Large-Scale Enterprises*, 29 AM. ECON. REV. (PAPERS & PROC.) 61, 69 (1939). Although Mason published several important articles on antitrust, see *supra* note 16, this article did not address antitrust.

The idea of delineating a market around each particular firm traces back to Nicholas Kaldor, *Mrs. Robinson's "Economics of Imperfect Competition,"* 1 ECONOMICA (n.s.) 335, 339-40 (1934).

23. JOE S. BAIN, *PRICING, DISTRIBUTION, AND EMPLOYMENT* 16-18 (1948).

24. STIGLER, *supra* note 20, at 282-83.

25. A famous antitrust law dictum is Learned Hand's statement that while ninety percent "is enough to constitute a monopoly; it is doubtful whether sixty or sixty-four percent would be enough; and certainly thirty-three per cent [sic] is not." *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 424 (2d Cir. 1945) (certified to the Second Circuit in the absence of a quorum of six Supreme Court justices). The percentages represented the defendant's shares in various alternative markets.

On market delineation in early monopolization cases, see G.E. HALE & ROSEMARY D. HALE, *MARKET POWER: SIZE AND SHAPE UNDER THE SHERMAN ACT* 97-103, 113-16 (1958); Donald F. Turner, *Antitrust Policy and the Cellophane Case*, 70 HARV. L. REV. 281, 286-97 (1956); William F. Upshaw, *The Relevant Market in Merger Decisions: Antitrust Concept or Antitrust Device?*, 60 NW. U. L. REV. 424, 428-41 (1965).

26. See, e.g., Milton Handler & Stanley D. Robinson, *A Decade of Administration of the Celler-Kefauver Antimerger Act*, 61 COLUM. L. REV. 629, 641-42 (1961).

The one notable exception was Learned Hand's opinion in *United States v. Corn Prods. Ref. Co.*, 234 F. 964, 975-76 (S.D.N.Y. 1916), *appeal dismissed*, 249 U.S. 621 (1919). Judge Hand stated that one maltose product is not in the relevant market for a second if the second sells at a significantly lower price. This is a rather sophisticated argument not grasped by all modern

tive to the choice of the market. Moreover, exclusionary conduct, and not market structure, was the focus of these monopolization cases.²⁷

In merger cases, the analysis of market structure plays a more prominent role. In fact, earliest usage of the term "relevant market" in a reported federal antitrust decision was in a merger case, the Supreme Court's 1948 decision *United States v. Columbia Steel Co.*²⁸ Although the Court used the term "relevant market," it "recognize[d] the difficulty of laying down a rule as to what areas or products are competitive, one with another" and made no attempt to lay down such rules.²⁹ The Court ultimately held that the challenged acquisition did not violate the Sherman Act.³⁰

Congressional dissatisfaction with the outcome of this case helped prompt passage³¹ of the Celler-Kefauver Act of 1950,³² amending Section 7 of the Clayton Act.³³ The original Section 7 prohibited the acquisition by one corporation of the stock of another if the effect "may be to substantially lessen competition between such corporations."³⁴ The Celler-Kefauver Act changed the prohibition to that of acquisitions of stock or assets the effect of which "may be substantially to lessen competition . . . in any line of commerce in any section of the country."³⁵ The latter phrase was equated with

judges. See *United States v. Archer-Daniels-Midland Co.*, 695 F. Supp. 1000 (S.D. Iowa 1987), *rev'd*, 866 F.2d 242 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989).

27. See, e.g., *United States v. United States Steel Corp.*, 251 U.S. 417, 451 (1920) ("[T]he law does not make mere size an offence or the existence of unexercised power an offence."); *Standard Oil Co. v. United States*, 221 U.S. 1, 62 (1911) (stating that there is no "direct prohibition against monopoly in the concrete").

28. 334 U.S. 495, 508 (1948). The term "relevant competitive market" also was used. See *id.* at 519, 520, 527.

29. *Id.* at 511. The Court did suggest that supply substitutes must be included in the relevant market. See *id.* at 510.

30. *Id.* at 527-31. For a discussion of the *Columbia Steel* case, see Sergei S. Zlinkoff & Robert C. Barnard, *Mergers and the Anti-Trust Laws: The Columbia Steel Case, The Supreme Court and a Competitive Economy 1947 Term*, 97 U. PA. L. REV. 151 (1948).

31. The role of *Columbia Steel* in motivating Congress is discussed in *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 342 n.20 (1963), and *Brown Shoe Co. v. United States*, 370 U.S. 294, 318-19 n.33 (1962). Another motivating factor was the desire to close the "asset loophole" whereby acquiring firms could avoid the Clayton Act prohibition by acquiring the assets of the target firm. See *Brown Shoe*, 370 U.S. at 312-14, 316 & n.29. The importance of *Columbia Steel* is best illustrated by the fact that Congress considered legislation to close the asset loophole for years before that decision without result. See *id.* at 311-12 & n.19; see also Comment, *Corporate Consolidations and the Concentration of Economic Power: Proposals for Revitalization of Section 7 of the Clayton Act*, 57 YALE L.J. 613, 621-27 (1948).

32. Ch. 1184, 64 Stat. 1125 (1950) (codified as amended at 15 U.S.C. § 18 (1988)).

33. Ch. 1184, § 7, 64 Stat. 1125, 1126 (1950) (current version at 15 U.S.C. § 18 (1988)).

34. Ch. 323, § 7, 38 Stat. 731, 732 (1914) (current version at 15 U.S.C. § 18 (1988)). Also prohibited were acquisitions of stock that would "tend to create a monopoly in any line of commerce." *Id.*

35. Ch. 1184, 64 Stat. 1125, 1126 (1950) (codified as amended at 15 U.S.C. § 18 (1988)).

"relevant market," thereby explicitly introducing market delineation into the process.³⁶

B. The Emergence of Antitrust Market Delineation, 1952-55

In economics, the effect of a change in the price of one product on the sales of a second product is measured by the cross-elasticity of demand. In particular, the cross-elasticity of demand is the proportionate change in the quantity sold of the second product divided by the proportionate change in the price of the first product.³⁷ The earliest use of cross-elasticity of demand to assist in market delineation was in the Supreme Court's 1953 opinion in *Times-Picayune Publishing Co. v. United States*.³⁸ Before that time, it appears there was no articulation of the cross-elasticity test in the legal literature, and the first explicit articulation of the test in the economic literature appears to have been just a year earlier.³⁹

In 1952, Joe Bain defined the "industry" for a product as consisting of "close substitutes" identified on the basis of cross-elasticity of demand. He began by discussing the industry concept applied to a group of products that are "perfect substitutes for each other," and that have only "distant

36. See MARK S. MASSEL, COMPETITION AND MONOPOLY: LEGAL AND ECONOMIC ISSUES 264 (1962); see also *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 356 (equating "line of commerce" with "relevant product or service market" and "section of the country" with "relevant geographic market"); *United States v. Brown Shoe Co.*, 179 F. Supp. 721, 729, 732 (E.D. Mo. 1959), *aff'd*, 370 U.S. 294 (1962); *United States v. Bethlehem Steel Corp.*, 168 F. Supp. 576, 588 (S.D.N.Y. 1958) (stating that "'line of commerce' signifies a product market and 'section of the country' refers to the geographic market"). See generally REPORT OF THE ATT'Y GEN.'S NAT'L COMM. TO STUDY THE ANTITRUST LAWS 118-19 (1955) (Stanley N. Barnes & S. Chesterfield Oppenheim, co-chairpersons) [hereinafter COMMITTEE REPORT].

37. The magnitude of the cross-elasticity of demand depends on the magnitude of the price change considered and whether price is increased or decreased. In addition, for any pair of products, there are two cross-elasticities of demand, because either product can be the one for which price is varied. These two cross-elasticities may be very different.

38. 345 U.S. 594, 612 n.31 (1953).

39. I am fairly confident that the first published, explicit proposals to base market delineation on cross-elasticity of demand appeared in JOE S. BAIN, PRICE THEORY 25-26, 50-53 (1952) and MACHLUP, *supra* note 20, at 213-14. However, I am also fairly confident that the basic idea went back further and was not first conceived by either Bain or Machlup. For an earlier passing reference to the use of cross-elasticity of demand for market delineation, see NUTTER, *supra* note 21, at 13.

Cross-elasticities of demand also were a central focus of an essentially unrelated literature in economics on market structure classification (that is, the definition of monopoly and other market structures), and much of that literature came before 1952. E.g., Edward H. Chamberlin, *Measuring the Degree of Monopoly and Competition, in MONOPOLY AND COMPETITION AND THEIR REGULATION* 255 (Edward H. Chamberlin ed., 1954); WILLIAM J. FELLNER, COMPETITION AMONG THE FEW 50-54 (1949); TRIFFIN, *supra* note 19, ch. 3; Robert L. Bishop, *Elasticities, Cross-Elasticities, and Market Relationships*, 42 AM. ECON. REV. 779 (1952); Andreas G. Papandreou, *Market Structure and Monopoly Power*, 39 AM. ECON. REV. 883 (1949).

substitutes" outside the market. Then, much like Robinson⁴⁰ and Chamberlin,⁴¹ he noted that in the real world, products often are "imperfect substitutes" for each other and that substitutability is a matter of degree.⁴² Quite unlike Robinson and Chamberlin, he went on to explain:

This phenomenon requires an adaptation of an industry. Each seller of a slightly different good should not be put in a separate "industry" when his price changes in fact tend strongly to influence the sales of a number of close substitute products. The definition of an industry is thus conveniently expanded so that an industry may include not only identical or perfect substitute products but alternatively close substitute products. The general criterion for inclusion of products in an industry becomes close substitutability, of which perfect substitutability is a special and extreme case. A group of products are close substitutes if a reduction in the price of any of them will significantly or noticeably affect the quantity purchased of the others at given prices—if a significant proportion of the buyers of the others may be "stolen" by such a move. The industry includes a range of close-substitute products so defined; it excludes any product the demand for which is not significantly influenced by the industry's price changes.⁴³

The concept of cross-elasticity of demand is explicit in this statement, even though the term itself is not used. Bain, however, did use the term in later elaboration on the identification of close substitutes: "The magnitude of [the] cross-elasticity indicates the degree of substitutability. A low cross-elasticity indicates poor substitutes; a high cross-elasticity indicates close substitutes."⁴⁴

Also in 1952, Fritz Machlup articulated a concept much like that of Bain. Machlup, however, added cross-elasticity of supply as a factor for determining market boundaries. The cross-elasticity of supply is defined as the proportionate change in the quantity supplied of one product divided by the proportionate change in the price of a second product that induced the supply response by the first product. Machlup also emphasized that markets are merely convenient analytical tools, a point perhaps more telling in antitrust law than in economics. He wrote:

The economist's concept of the industry is an abstraction for the purpose of limiting the scope of problems of interdependence. In the

40. See *supra* notes 17–18 and accompanying text.

41. See *supra* notes 17, 19 and accompanying text.

42. BAIN, *supra* note 39, at 23–24.

43. *Id.* at 24–25. Similar language can be found in BAIN, *supra* note 23, at 16, but with no reference to cross-elasticity of demand.

44. BAIN, *supra* note 39, at 52. See generally *id.* at 50–53.

last analysis, everything in the economy hangs together; but not all interdependence is substantial or even definite as to its direction. . . . [T]he concept of the industry is nothing but an expedient device for ruling out negligible or too uncertain interdependence.

Interdependence is conveniently expressed by *cross-elasticities* of demand and supply (or cost). . . . Using the term cross-elasticity for both types of relationships we might advance the following statement as something approaching a definition of an industry. *Firms related through cross-elasticities of the demands for their products or of the supplies of their factors may be said to constitute an "industry" if these cross-elasticities are either so important or so definite that they could not be neglected without impairing the considerations of the firms or the analysis of the economist.*⁴⁵

As noted above, the Supreme Court first mentioned the use of cross-elasticity of demand in the *Times-Picayune* case. The Court did not discuss market delineation at length in that case, but it did for the first time offer some principles for market delineation. First, the Court noted that the "‘market,’ as most concepts in law or economics, cannot be measured by metes and bounds."⁴⁶ In a footnote, the Court added:

For every product, substitutes exist. But a relevant market cannot meaningfully encompass that infinite range. The circle must be drawn narrowly to exclude any other product to which, within reasonable variations in price, only a limited number of buyers will turn; in technical terms, products whose "cross-elasticities of demand" are small.⁴⁷

There are two important principles in this brief statement. One is that close substitutes should be identified using cross-elasticities of demand. The other is that markets should be narrowly delineated. The Court cited neither precedent nor scholarly authority for either principle.⁴⁸ We will

45. MACHLUP, *supra* note 20, at 213–14 (definitions of cross-elasticity of demand and supply omitted from second paragraph).

46. *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 611 (1953).

47. *Id.* at 612 n.31. This dictum had little relevance to the case. The defendant owned the *Times-Picayune*, the only morning newspaper in New Orleans, and one of two evening papers. It required advertisers to purchase advertising in both of its papers. The district court found this to be an illegal tying arrangement. *Id.* at 596–98, 601. However, the Supreme Court found that the relevant market for the advertising in the morning paper included advertising in the afternoon paper, and the *Times-Picayune* was not dominant in that market. Thus, there was not an illegal tie. *Id.* at 611–13. The Court also found that the challenged practice did not otherwise violate the antitrust laws. *Id.* at 614–28.

48. This is especially notable because the opinion contains numerous citations to economic and newspaper literature. In all likelihood these citations were supplied by the clerks of Justice Clark, who signed the opinion. Those clerks were Frederick M. Rowe, who worked on the opinion, and Bernard Weisberg.

never know from where the Court got the idea of cross-elasticity of demand as a test for market delineation.

Shortly before *Times-Picayune* was decided, an important district court opinion came down in *United States v. United Shoe Machinery Corp.*⁴⁹ That case made no significant contributions to market delineation, but it was responsible for several minor contributions by economists in 1954. One was a restatement of the traditional skepticism of economists of the utility of the market delineation-market share approach to antitrust.⁵⁰ The other was a defense of that approach and a general endorsement of market delineation by the courts.⁵¹ This is particularly notable because it was made by Carl Kaysen, who served as a law clerk on the *United Shoe Machinery* case even though he was an economist.⁵²

The first two law review articles on antitrust market delineation also appeared in 1954. One was a student note that appeared in the *Columbia Law Review*, and the other was a student comment that appeared in the *Michigan Law Review*.⁵³ The *Columbia* note appears to have introduced the terms "product market" and "geographic market."⁵⁴ It drew on *Times-Picayune* in arguing: "It is essential . . . to narrow the market concept so that in each instance only like products with a considerable cross-elasticity of demand will be included in a particular market."⁵⁵ The note also advo-

49. 110 F. Supp. 295 (D. Mass. 1953).

50. See Lucile Sheppard Keyes, *The Shoe Machinery Case and the Problem of the Good Trust*, 68 Q.J. ECON. 287, 297-301 (1954).

51. See Carl Kaysen, *Market Definition in Anti-Trust Law Proceedings*, THE GROWING ROLE OF ECONOMIC DATA IN JUDICIAL AND ADMINISTRATIVE PROCEEDINGS 18 (1954). Kaysen explained that "a market includes all those commodities which are substitutes in use from the point of view of buyers, at or around the current level of prices." *Id.* at 18.

52. See CARL KAYSEN, UNITED STATES V. UNITED SHOE MACHINERY CORPORATION vii-viii (1956).

53. Note, *The Market: A Concept in Anti-Trust*, 54 COLUM. L. REV. 580 (1954); David MacDonald, Comment, *Product Competition in the Relevant Market Under the Sherman Act*, 53 MICH. L. REV. 69 (1954).

54. Note, *supra* note 53, at 585. These two terms are convenient and very commonly used in antitrust; however, they can be misleading. There is but one relevant market with product and geographic dimensions—not separate product and geographic markets. The product and geographic dimensions of relevant markets must be delineated in the context of each other, and the separation into product and geographic dimensions is an oversimplification. Transportation, for example, cannot be sensibly separated along such lines. In addition, the separation can be problematic when the products differ in both physical and geographic dimensions. It may be clear that a distant, different product is not in a relevant market but not so clear whether the reason should be attributed to its product or its geographic differences. While the terms "product market" and "geographic market" are inescapable in discussing the case law and some of the commentary, they will not otherwise be used below.

55. *Id.* at 585-86.

cated the delineation of product markets on the basis of "reactive interchangeability," a concept closely resembling cross-elasticity of demand.⁵⁶

The *Michigan* comment provided a useful summary of the case law,⁵⁷ including discussions of *Times-Picayune* and the district court's decision in the *Cellophane* case,⁵⁸ and it proposed a test for market delineation. Under the test proposed in the *Michigan* comment, a product is in the relevant market for a defendant's product if "the average customer [can] change without substantial difficulty from the product of the defendant to" the other product.⁵⁹ The *Michigan* comment also provided useful discussions of some relevant economic literature and of the concept of cross-elasticity of demand.⁶⁰

The Attorney General's National Committee to Study the Antitrust Laws, a large group of prominent lawyers and economists, submitted its report to the president in 1955. It attempted to go further than the courts had in laying out principles for market delineation:

For our purposes, a market is an economic relationship among sellers and buyers, whose boundaries are not necessarily defined by geographical area alone, nor by conventional product classifications. To ascertain whether a firm or group of firms acting in concert has monopoly power, "the market" should include all firms whose production has so immediate and substantial an effect on the prices and production of the firms in question that the actions of the one group cannot be explained without direct and constant reference to the other. One should include in a market all firms whose products are

56. *Id.* at 586.

57. Macdonald, *supra* note 53, at 70-80.

58. *United States v. E.I. du Pont de Nemours & Co.*, 118 F. Supp. 41 (D. Del. 1953), *aff'd*, 351 U.S. 377 (1956). For purposes of consistency and clarity, this opinion, along with the Supreme Court's ultimate opinion in this case, will both be referred to as the *Cellophane* case. See *supra* note 9 and accompanying text.

59. MacDonald, *supra* note 53, at 82.

60. *Id.* at 82-84 & nn.61, 63-67. The discussion cites two economic treatises: JOE S. BAIN, *PRICING, DISTRIBUTION, AND EMPLOYMENT* (2d ed. 1953) and TIBOR SCITOVSKY, *WELFARE AND COMPETITION* (1951). They are cited, however, almost exclusively for the definition of cross-elasticity of demand and not at all for the idea of using cross-elasticity of demand in market delineation. Macdonald, *supra* note 53, at 75 n.30, 83 nn.63 & 66. The relevant portions of Bain's book are quite literally identical to those of BAIN, *supra* note 39. Not only did Bain discuss cross-elasticity of demand at length, but he also proposed cross-elasticity as the test for market delineation.

While the comment's scholarship was considerable, it totally misperceived a statement quoted from Chamberlin, *supra* note 19, at 101, and erroneously credited Chamberlin with the idea of basing market delineation on cross-elasticities of demand. Macdonald, *supra* note 53, at 82 & n.61. The quoted passage referred to market structure classification (see *supra* note 39) rather than market delineation. Chamberlin did not "inadvertently" substitute one phrase for another as the comment asserts. Macdonald, *supra* note 53, at 82 & n.61.

in fact good and directly available substitutes for one another in sales to some significant group of buyers, and exclude all others. Where the products of different industries compete directly as alternatives for the same use, the market for that class of products should include the rival goods supplied by different industries. One should combine into one market two or more products (or two or more areas) if an appreciable fall in the price of one product (or in one area) will promptly lead to a relatively large diversion of purchasers from the other product (or area).⁶¹

This statement incorporates both the cross-elasticity-of-demand test and the Mason-Bain-Stigler notion of a market. The cross-elasticity-of-demand test surely was taken from *Times-Picayune*. The other notion most likely was the result of George Stigler being a member of the Committee.

C. The Cellophane Case

In a 1953 opinion occupying 192 pages of the Federal Supplement,⁶² the Delaware District Court held that du Pont had not "monopolize[d] interstate trade in cellophane,"⁶³ even though it accounted for three-quarters of the sales of cellophane in the United States.⁶⁴ The district court found that cellophane faced substantial competition in its various uses from a variety of other products.⁶⁵ Thus, it held that the "relevant market for determining the extent of du Pont's market control is the market for flexible packaging materials."⁶⁶ Ultimately, the court concluded: "Competitive influences in the flexible packaging markets, place limitations upon du Pont's pricing policies and procedures. They force reduction of du Pont's prices and deny it power to raise prices in the manner of a monopolist."⁶⁷ The court did not use the term "cross-elasticity of demand" in explaining its reasoning, but the concept certainly played an important part.

The district court's analysis was severely criticized in an oft-cited article written by economists George Stocking and Willard Mueller.⁶⁸ They argued at length that du Pont was exercising market power over cellophane. Indeed, it was the fact that du Pont had raised prices to the monopoly level that brought other products into competition with cellophane. They con-

61. COMMITTEE REPORT, *supra* note 36, at 322.

62. *Cellophane*, 118 F. Supp. at 41-233.

63. *Cellophane*, 351 U.S. at 378-79 and n.1.

64. *Id.* at 379; *Cellophane*, 118 F. Supp. at 115-16.

65. *Cellophane*, 118 F. Supp. at 197-207.

66. *Id.* at 60.

67. *Id.* at 207.

68. George W. Stocking & Willard F. Mueller, *The Cellophane Case and the New Competition*, 45 AM. ECON. REV. 29 (1955).

cluded that "cellophane is so different from other flexible packaging materials that its cross elasticity of demand gives du Pont significant and continuing monopoly power."⁶⁹

The government appealed,⁷⁰ contending "that cellophane and other wrapping materials are neither substantially fungible nor like priced."⁷¹ Thus, argued the government, "the market for other wrappings is distinct from the market for cellophane and . . . the competition afforded cellophane by other wrappings is not strong enough to be considered in determining whether du Pont has monopoly powers."⁷² In 1956, the Supreme Court affirmed the district court by the slimmest of majorities,⁷³ establishing one of its most important market delineation precedents.

The Court began by framing the issue presented:

Market delimitation is necessary . . . to determine whether an alleged monopolist violates § 2 [of the Sherman Act]. The ultimate consideration in such a determination is whether the defendants control the price and competition in the market for such part of trade or commerce as they are charged with monopolizing. Every manufacturer is the sole producer of the particular commodity it makes but its control in the above sense of the relevant market depends upon the availability of alternative commodities for buyers: i.e., whether there is a cross-elasticity of demand between cellophane and the other wrappings. This interchangeability is largely gauged by the purchase of competing products for similar uses considering the price, characteristics and adaptability of the competing commodities.⁷⁴

After posing this issue, the Court reviewed the facts of the case and the relevant law. The Court then explained that market delineation would determine whether du Pont had monopoly power: "If cellophane is the 'mar-

69. *Id.* at 63. Stocking and Mueller referred to cross-elasticity of demand as the test elsewhere as well. *See id.* at 54, 56.

70. From 1903 to 1974, Department of Justice cases could be appealed directly to the Supreme Court under the Expediting Act, ch. 544, § 2, 32 Stat. 823 (1903), which was amended by the Antitrust Procedures and Penalties Act, Pub. L. No. 93-528, § 5, 88 Stat. 1706, 1709 (1974).

71. *Cellophane*, 351 U.S. at 380.

72. *Id.* The government's phrasing is also quoted by the Court. *Id.* at 394.

73. The majority opinion was written by Justice Reed and joined by Justices Burton and Minton, with Justice Frankfurter concurring. *Id.* at 377-414. Justice Warren filed a dissenting opinion joined by Justices Black and Douglas. *Id.* at 414-26. Justices Clark and Harlan took no part in the consideration of the case. *Id.* at 377.

74. *Id.* at 380-81.

ket' that du Pont is found to dominate, it may be assumed it does have monopoly power over that 'market.' ”⁷⁵

These two observations by the Court identify the essential relationship between market delineation and market power. Markets are delineated for the purposes of assessing market power. It would be silly to consider monopolization of a “market” over which even a monopolist (protected from entry) would not possess significant market power because products outside the delineated market were good substitutes.

The Court then tackled the market delineation question, beginning with basic principles. The Court rejected the government’s “substantially fungible” test, holding that “monopoly does not exist merely because the product said to be monopolized differs from others.”⁷⁶ The Court then expressed its test in two ways. The first formulation was cross-elasticity of demand: “What is called for is an appraisal of the ‘cross-elasticity’ of demand in the trade.”⁷⁷ Later in the opinion, the Court elaborated on the cross-elasticity formulation:

An element for consideration as to cross-elasticity of demand between products is the responsiveness of the sales of one product to price changes of the other. If a slight decrease in the price of cellophane causes a considerable number of customers of other flexible wrappings to switch to cellophane, it would be an indication that a high cross-elasticity of demand exists between them; that the products compete in the same market.⁷⁸

The second formulation was “reasonable interchangeability”: “In considering what is the relevant market . . . no more definite rule can be declared than that commodities reasonably interchangeable by consumers for the same purposes make up” the relevant market.⁷⁹ In the conclusion of its opinion, the court restated this formulation to hold that the relevant market “is composed of products that have reasonable interchangeability for the purposes for which they are produced—price, use and qualities considered.”⁸⁰

75. *Id.* at 391.

76. *Id.* at 394.

77. *Id.* The court cited a note in the *Columbia Law Review* for this proposition. See Note, *supra* note 53. It should be recalled, however, that the *Columbia* note merely repeated what the Court had held in *Times-Picayune*. See *supra* text accompanying note 55.

78. *Cellophane*, 351 U.S. at 400 (footnote omitted). The omitted footnote is a citation to BAIN, *supra* note 60, at 52, and SCITOVSKY, *supra* note 60, at 396. The citation to Bain and Scitovsky also appears in Macdonald, *supra* note 53, at 83 n.68.

79. *Cellophane*, 351 U.S. at 395.

80. *Id.* at 404.

The Court's second formulation reflects the fact that market delineation presents complicated factual questions that must be addressed in a real-world context. If products have differing attributes and prices, the effects of those differences must be carefully analyzed. As the Court explained: "The selling price between commodities with similar uses and different characteristics may vary, so that the cheaper product can drive out the more expensive. Or, the superior quality of higher priced articles may make dominant the more desirable."⁸¹

The Court then examined the factual record established by the district court. The Court viewed these facts as demonstrating that, "despite cellophane's advantages, it has to meet competition from other materials in every one of its uses. . . . Moreover, a very considerable degree of functional interchangeability exists between these products."⁸² Thus, the Court found "that cellophane's interchangeability with the other materials mentioned suffices to make it a part of this flexible packaging material market."⁸³

The dissent argued that the record showed "conclusively that cellophane is the relevant market."⁸⁴ They found ample evidence supporting the argument of economists Stocking and Mueller that du Pont had been exercising substantial market power for many years.⁸⁵

Cellophane precipitated much comment in law journals, most of it critical.⁸⁶ Perhaps the one notable point was George Stocking's argument that the concept of cross-elasticity of demand "cannot be of much use in anti-trust cases and that its use by those not trained in economics will lessen the effectiveness of Section 2 of the Sherman Act."⁸⁷ In essence, he made two points. One was that it is essential to know how high the cross-elasticity is, and such information will not be available. The other was that cross-elasticities of demand are not a sufficient basis for delineating markets.⁸⁸

81. *Id.* at 396.

82. *Id.* at 399. *See generally id.* at 397-404.

83. *Id.* at 400.

84. *Id.* at 425 (Warren, C.J., dissenting).

85. *Id.* at 418-23 (Warren, C.J., dissenting). Stocking & Mueller, *supra* note 68, are cited throughout Chief Justice Warren's dissenting opinion. *Cellophane*, 351 U.S. at 415 n.2, 418 n.4, 421 n.15 (Warren, C.J., dissenting).

86. *E.g.*, Joel B. Dirlam & Irwin M. Stelzer, *The Cellophane Labyrinth*, 1 ANTITRUST BULL. 633 (1956); Gerhard A. Gesell, *Legal Problems Involved in Proving Relevant Markets*, 2 ANTITRUST BULL. 463 (1957); George W. Stocking, *Economic Tests of Monopoly and the Concept of the Relevant Market*, 2 ANTITRUST BULL. 479 (1957); Turner, *supra* note 25.

87. Stocking, *supra* note 86, at 484.

88. *Id.* at 488. Stocking's rationale for the latter point was not entirely clear, but the point was correct. *See infra* notes 491-93 and accompanying text.

Cellophane made significant contributions to antitrust market delineation, and it continues to be followed by the lower courts.⁸⁹ However, there is now a consensus that the Court reached the wrong conclusion on market delineation for the reasons first articulated by Stocking and Mueller.⁹⁰ The Court's error was to evaluate the cross-elasticity of demand at the monopoly price, and this mistake has come to be known as the "*Cellophane fallacy*."⁹¹ A rational monopolist raises price until competition from other products makes further increases unprofitable. At that point, there are likely to be significant cross-elasticities of demand with other products, but they are entirely irrelevant to the question of whether the firm possesses market power. The relevant question for assessing the firm's market power is whether the cross-elasticities of demand were so great near competitive price levels as to prevent a significant elevation of prices above the competitive level in the first instance.

II. ANTITRUST MARKET DELINEATION FROM THE *CELLOPHANE* CASE TO *BROWN SHOE*

A. *The Du Pont-General Motors Case*⁹²

In 1957, the Supreme Court considered market delineation in the context of a vertical merger case. Between 1917 and 1919, du Pont acquired a

89. Since the issuance of the 1982 Merger Guidelines, all of the regional circuit courts of appeals have cited *Cellophane* as a market delineation precedent. See *Murrow Furniture Galleries, Inc. v. Thomasville Furniture Indus., Inc.*, 889 F.2d 524, 528 (4th Cir. 1989); *United States Football League v. National Football League*, 842 F.2d 1335, 1361 (2d Cir. 1988), *cert. denied*, 493 U.S. 1071 (1990); *Oltz v. St. Peter's Community Hosp.*, 861 F.2d 1440, 1446 (9th Cir. 1988); *Ad-Vantage Tel. Directory Consultants, Inc. v. GTE Directories Corp.*, 849 F.2d 1336, 1341-42 (11th Cir. 1987); *Henry v. Chloride, Inc.*, 809 F.2d 1334, 1342 (8th Cir. 1987); *Fishman v. Estate of Wirtz*, 807 F.2d 520, 531 (7th Cir. 1986); *Westman Comm'n Co. v. Hobart Int'l, Inc.*, 796 F.2d 1216, 1221 (10th Cir. 1986), *cert. denied*, 486 U.S. 1005 (1988); *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C. Cir. 1986), *cert. denied*, 479 U.S. 1033 (1987); *Doomed Stadium Hotel, Inc. v. Holiday Inns, Inc.*, 732 F.2d 480, 487-88 (5th Cir. 1984); *American Bearing Co. v. Litton Indus., Inc.*, 729 F.2d 943, 949 (3d Cir.), *cert. denied*, 469 U.S. 854 (1984); *White & White, Inc. v. American Hosp. Supply Corp.*, 723 F.2d 495, 500 (6th Cir. 1983); *Home Placement Serv., Inc. v. Providence Journal Co.*, 682 F.2d 274, 280 (1st Cir. 1982), *cert. denied*, 460 U.S. 1028 (1983).

90. The consensus is demonstrated by 2 PHILLIP AREEDA & DONALD F. TURNER, *ANTITRUST LAW* 398-400 (1978); HERBERT HOVENKAMP, *ECONOMICS AND FEDERAL ANTITRUST LAW* 63-64 (1985); RICHARD A. POSNER & FRANK H. EASTERBROOK, *ANTITRUST* 360-62 (2d ed. 1981); LAWRENCE A. SULLIVAN, *HANDBOOK OF THE LAW OF ANTITRUST* 53-58 (1977).

91. See, e.g., Gene C. Schaerr, Note, *The Cellophane Fallacy and the Justice Department's Guidelines for Horizontal Mergers*, 94 YALE L.J. 670 (1985).

92. 353 U.S. 586 (1957). This case will be referred to throughout the remainder of this Article as the *du Pont-General Motors* case. It should not be confused with the Supreme Court's decision a year earlier involving the same parties. Compare *United States v. E.I. du Pont de*

twenty-three percent interest in General Motors.⁹³ Thirty years later, the government brought suit under Section 7 of the Clayton Act,⁹⁴ seeking divestiture. The government contended that du Pont's ownership interest had lessened competition in the sale of automotive finishes and fabrics to General Motors.⁹⁵ In a lengthy opinion, the district court found that the feared effects had not materialized in thirty years, so there was no Section 7 violation.⁹⁶

On appeal to the Supreme Court, appellees argued that du Pont's sales to General Motors were too small to have been of competitive significance if the relevant markets were delineated to include all industrial finishes and fabrics. However, the Court held "that automotive finishes and fabrics have sufficient peculiar characteristics . . . to make them a 'line of commerce' within the meaning of the Clayton Act."⁹⁷ The Court did not discuss the meaning of this test and only briefly discussed its application, primarily by citing the discussion of the record in the district court opinion.⁹⁸ In this relevant market, du Pont's share was considerable, and despite a lack of direct evidence of an anticompetitive effect, the Supreme Court reversed the district court's decision.⁹⁹ Justice Burton, in a sharp dissent, argued that there was no basis in the record for the relevant market found by the majority.¹⁰⁰

The relevant market found by the Court was considered "exceedingly narrow" by one prominent commentator,¹⁰¹ who was not alone in questioning the basis for limiting the market to automotive uses when du Pont's product was also used in other industries.¹⁰² Other commentators suggest

Nemours & Co., 353 U.S. 586 (1957) (the *du Pont-General Motors* case) with *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956) (the *Cellophane* case); see also *supra* note 9.

93. *United States v. E.I. du Pont de Nemours & Co.*, 126 F. Supp. 235, 238-40 (N.D. Ill. 1954), *rev'd*, 353 U.S. 586 (1957). For purposes of consistency and clarity, this opinion, along with the Supreme Court's ultimate opinion in this case, will both be referred to as the *du Pont-General Motors* case.

94. 15 U.S.C. § 18 (1988); see also *supra* note 2 and accompanying text.

95. *Du Pont-General Motors*, 353 U.S. at 588-89.

96. *Du Pont-General Motors*, 126 F. Supp. at 335.

97. *Du Pont-General Motors*, 353 U.S. at 593-94.

98. *Id.* at 594 n.12, (citing *du Pont-General Motors*, 126 F. Supp. at 288-92, 296-300).

99. *Du Pont-General Motors*, 353 U.S. at 596, 607.

100. *Id.* at 648-52 (Burton, J., dissenting).

101. Jesse W. Markham, *The Du Pont-General Motors Decision*, 43 VA. L. REV. 881, 887-88 (1957).

102. See *id.* at 887; Henry G. Manne, *The Perplexing Du Pont Case: Additional Confusion in the Law of Mergers*, 106 U. PA. L. REV. 385, 395-96 (1958); see also 2 AREEDA & TURNER, *supra* note 90, at 418.

The dissenters suggested that du Pont sold a considerable portion of the relevant finishes outside the automotive industry. *Du Pont-General Motors*, 353 U.S. at 650-51 & n.36 (Burton, J.,

that the Court may have reached the correct result on the market delineation issue.¹⁰³ Whichever is the case, the Court certainly did not provide a cogent rationale for the narrow markets of automotive finishes and fabrics. Given the broad market found in *Cellophane* almost exactly a year before, more explanation was very much needed.

The Court's decision is remarkable in that it made no reference to the extensive discussion of market delineation in *Cellophane* a year earlier. This omission created confusion¹⁰⁴ and led to a debate in the law reviews and in the courts as to whether the Court had abandoned the market delineation principles it articulated in *Cellophane*.

One side in this debate based its case on arguments advanced by Donald Turner in discussing the *Cellophane* case. Turner reasoned that "the Clayton Act requires less of a showing of probable harm than does the Sherman Act," so "definition of the market in 'monopolizing' cases is not appropriate for most merger cases."¹⁰⁵ The clear implication, not explicitly stated by Turner, was that markets in Section 7 cases should be smaller than markets in Section 2 cases.¹⁰⁶ Turner also argued that under Section 7:

No single definition of market would be appropriate for all cases, or even for a single case in some instances. Assume, for example, that there were three cellophane producers and three glassine producers in this country, and no other close substitutes. It would seem appropriate to test a merger of two cellophane producers for its effect on the cellophane market (competition among producers of cellophane) as well as for its effect on the broader flexible-packaging-materials market and to hold the merger illegal if there were probable ill effects on either market. Similarly, a merger between a cellophane and a glassine producer would be tested for its effects on both markets; i.e., the merger would not be upheld solely because it involved companies producing different commodities.¹⁰⁷

dissenting). A relevant market limited to automotive uses, thus, is not plausible unless du Pont could price discriminate, charging a different price for its product in automotive uses than in other uses. There is no indication in the opinions or commentary that such was the case.

103. E.g., Joel B. Dirlam & Irwin M. Stelzer, *The Du Pont-General Motors Decision: In the Antitrust Grain*, 58 COLUM. L. REV. 24, 41 (1958); Guy B. Maseritz, *The Relevant Market—A Case Study of the DuPont-General Motors Decision*, 6 ANTITRUST BULL. 487 (1961).

104. See *The Supreme Court, 1956 Term*, 71 HARV. L. REV. 83, 168-69 (1957).

105. Turner, *supra* note 25, at 315.

106. See generally *supra* notes 2-3 and accompanying text.

107. Turner, *supra* note 25, at 315 n.80.

Turner's second argument was echoed by several economists,¹⁰⁸ and both of his arguments were adopted by a Justice Department official in commenting immediately after the *du Pont-General Motors* decision on the possible differences in approach to market delineation between it and *Cellophane*.¹⁰⁹ Several years later, another Justice Department official went even further, arguing in essence that *du Pont-General Motors* gave license for arbitrary market delineations.¹¹⁰ While not going nearly that far, several lower courts agreed that market delineation under Section 7 was different from that under Section 2.¹¹¹ On the other hand, two courts¹¹² and several commentators¹¹³ disagreed, contending that the two cases were entirely consistent.

Of paramount importance in evaluating the conflicting arguments about the interpretation of the *du Pont-General Motors* case is that no justice in the *Cellophane* majority was in the *du Pont-General Motors* majority.¹¹⁴ Justice Reed, who wrote the *Cellophane* opinion, retired after *du Pont-General Motors* was argued but before it was decided. He was replaced by Justice Whittaker, who was sworn in before the case was decided but took no part in the consideration of the case. Justice Minton, who joined in the four-justice majority in *Cellophane*, retired shortly before *du Pont-General Motors* was argued. Justice Brennan replaced him the next day through a recess appointment and went on to write the *du Pont-General Motors* opin-

108. E.g., Irston R. Barnes, *Competitive Mores and Legal Tests in Merger Cases: The Du Pont-General Motors Decision*, 46 GEO. L.J. 564, 603 n.119, 605 (1958); Dirlam & Stelzer, *supra* note 103, at 39-40; Manne, *supra* note 102, at 410.

109. Robert A. Bicks, *Mergers and Acquisitions: A Government Lawyer's Views*, 11 ABA ANTITRUST SEC. REPT. 20, 29-31 (1957). At the time, Bicks held the number two position in the Antitrust Division of the Justice Department.

110. George D. Reycraft, *Recent Developments Under the Sherman Act and Clayton Act and Other Aspects of the Program of the Antitrust Division*, 5 ANTITRUST BULL. 395, 407-09 (1960). Reycraft was the chief of one of the litigating sections in the Antitrust Division of the Justice Department. It appears that the Department of Justice argued this position in several cases. See Handler & Robinson, *supra* note 26, at 644-45.

111. See *Crown Zellerbach Corp. v. FTC*, 296 F.2d 800, 814-15 (9th Cir. 1961), *cert. denied*, 370 U.S. 937 (1962); *United States v. Brown Shoe Co.*, 179 F. Supp. 721, 730 (E.D. Mo. 1959), *aff'd*, 370 U.S. 294 (1962); *United States v. Bethlehem Steel Corp.*, 168 F. Supp. 576, 588, 592-93 n.34 (S.D.N.Y. 1958).

112. See *United States v. Philadelphia Nat'l Bank*, 201 F. Supp. 348 (E.D. Pa. 1962), *rev'd*, 374 U.S. 321 (1963); *United States v. Columbia Pictures Corp.*, 189 F. Supp. 153 (S.D.N.Y. 1960).

113. E.g., Handler & Robinson, *supra* note 26, at 643, 648; Thomas M. Lewyn & Stephen Mann, *Ten Years Under the New Section 7 of the Clayton Act: A Lawyer's Practical Approach to the Case Law*, 36 N.Y.U. L. REV. 1067, 1079, 1110 (1961); M.A. Adelman, Comment, *The Du Pont-General Motors Decision*, 43 VA. L. REV. 873, 879 (1957).

114. This fact has been emphasized by some prior commentators. See, e.g., MASSEL, *supra* note 36, at 272-73.

ion.¹¹⁵ Justice Brennan was joined by Chief Justice Warren and Justices Black and Douglas, who were the three dissenters in *Cellophane*.¹¹⁶

In retrospect, it seems clear that *du Pont-General Motors* marked a significant shift in ideology on the Court, which was to prove decisive over the remainder of Chief Justice Warren's tenure. It also seems likely that the majority in *du Pont-General Motors* intentionally avoided the language of *Cellophane*. On the other hand, it is not so clear that any important substantive difference was intended. The question is of no more than historical interest, however, because of *Brown Shoe's* reformulation of the test for market delineation.¹¹⁷

B. The Bethlehem Steel Case

After the amendments to the Clayton Act in 1950,¹¹⁸ the Federal Trade Commission (FTC) and the Department of Justice slowly began to challenge mergers. In the first three years, the government enforcement agencies challenged only one merger.¹¹⁹ Beginning in 1955, however, the pace of merger challenges quickened,¹²⁰ and, between 1957 and 1958, FTC administrative decisions and court decisions in government cases began appearing.¹²¹

The first government horizontal merger case brought under the amended Section 7 to be decided by a court was *United States v. Bethlehem Steel Corp.*¹²² in 1958. The Government sought to enjoin Bethlehem, the second-largest steel producer in the United States, from acquiring Youngstown Sheet and Tube Company, the sixth largest.¹²³ Both companies produced many different steel products.

115. See 352 U.S. iv (explaining Justice Brennan's appointment as well as Justice Whittaker's nomination and confirmation as a Supreme Court Justice).

116. Justices Burton and Frankfurter, who joined the majority in *Cellophane*, dissented, and Justices Clark and Harlan again took no part in the consideration of the case.

117. See *infra* notes 241-42 and accompanying text.

118. See *supra* notes 31-36 and accompanying text.

119. A complete list of government filings and their dispositions is provided by STAFF OF HOUSE ANTITRUST SUBCOMM., COMM. ON THE JUDICIARY, 90TH CONG., 1ST SESS., THE CELLER-KEFAUVER ACT: SIXTEEN YEARS OF ENFORCEMENT, at app. B, C (Comm. Print 1967) (written by Willard F. Mueller).

120. In 1954, the government enforcement agencies challenged two mergers; in 1955, they challenged eight; and in 1956, they challenged 18. *Id.*

121. The first published decision in a post-Celler-Kefauver merger case was in a private case in which one firm sought to prevent a takeover by the other. *Hamilton Watch Co. v. Benrus Watch Co.*, 114 F. Supp. 307 (D. Conn.), *aff'd*, 206 F.2d 738 (2d Cir. 1953).

122. 168 F. Supp. 576 (S.D.N.Y. 1958).

123. *Bethlehem Steel*, 168 F. Supp. at 580, 585-86.

The Government alleged both broad and narrow relevant markets and used as its market delineation standard the "peculiar characteristics and uses" test of *du Pont-General Motors*. Defendants alleged markets broader than the government's narrow markets, relying on the test in *Cellophane* and on substitutability in supply.¹²⁴ The court basically sided with the government, holding that "the peculiar characteristics and uses standard is sound and should be adopted," and rejected supply substitutability as a basis for market delineation.¹²⁵ The court also held that the market delineation principles in *Cellophane* were irrelevant under Section 7:

The issue under § 7 is whether there is a reasonable probability of substantial lessening of competition. There can be a substantial lessening of competition with respect to a product whether or not there are reasonably interchangeable substitutes. The merger of two producers of a product may substantially lessen competition . . . for that product even though it does not substantially lessen competition . . . in the broader market embracing all the products which are reasonably interchangeable with that product.¹²⁶

The court's reasoning is obscure. The most charitable reading is that the court adopted Donald Turner's argument.¹²⁷ The least charitable reading is that the court held that market delineation under Section 7 was entirely arbitrary.

Ultimately, the court found eleven different relevant product markets, including the "iron and steel industry as a whole."¹²⁸ The whole industry was said to be a relevant market because it was "commonly recognized by its members as well as the community at large as a separate industry."¹²⁹ The court followed the suggestion of the government and delineated both broad and narrow geographic markets.¹³⁰ For four different products, the court delineated five levels of concentric geographic markets: the United States as a whole; the "northeast quadrant of the United States"; the states of Michigan, New York, Ohio, and Pennsylvania as a group; the states of Michigan and Ohio together; and the states of Michigan and Ohio individu-

124. *Id.* at 589-90, 593.

125. *Id.* at 592-93 & n.34.

126. *Id.* at 594 n.36.

127. See Turner, *supra* note 25, at 315 n.80; see also *supra* text accompanying note 105.

128. *Bethlehem Steel*, 168 F. Supp. at 595.

129. *Id.* at 594.

130. *Id.* at 596-600.

ally.¹³¹ Based on the shares in these markets, the court had no difficulty in finding that the proposed merger would substantially lessen competition.¹³²

The court's analysis was subject to penetrating criticism by economist Morris Adelman. He strongly objected to the use of markets within markets:

It is a pathetic illusion that the market is whatever the courts choose to call it. The market, like the weather, is simply there, whether we only talk about it or do something: apply to it the standards of Clayton, or of Sherman, or of any law, or none. This confusion between the legal standard and the economic fact is writ large in the Bethlehem Steel opinion, . . . [which] sinks below error into chaos. If the northeast quadrant is a market area—is the locus of supply-demand forces that determine the price—then the other two areas are not. The evidence that sustains any one of the three market concepts necessarily condemns the others.¹³³

He also explained how he thought courts should, in principle, determine the single relevant market for analysis:

No matter how the boundaries may be drawn in terms of products or areas, there is a single test: if, within this purported market, prices were appreciably raised or volume curtailed, would supply enter in such amounts as to restore approximately the old price and output? If the answer is "yes," then there is no market, and the definition must be expanded. If the answer is "no," the market is at least not wider. If it would be "no" even on a narrower definition, then the narrower definition must be used.¹³⁴

Adelman also took the court to task for refusing to consider supply substitutability in delineating markets.¹³⁵

Economist Lucile Sheppard Keyes criticized the court for abandoning the sensible principles of *Cellophane* that properly focused on monopoly power. If Section 7 calls for a different standard than Section 2, she argued, the difference should manifest itself in market share thresholds. She also

131. *Id.* at 600–03. For the other seven product markets, the single relevant geographic market was the United States. *Id.* at 603.

132. *Id.* at 603–11.

133. Morris A. Adelman, *The Antimerger Act, 1950–60*, 51 AM. ECON. REV. (PAPERS & PROC.) 236, 237 (1961) (citations omitted); M.A. Adelman, Comment, *Economic Aspects of the Bethlehem Opinion*, 45 VA. L. REV. 684, 688, 691–94 (1959). This view was later adopted by 2 AREEDA & TURNER, *supra* note 90, at 411.

134. Adelman, *Economic Aspects of the Bethlehem Opinion*, *supra* note 133, at 688. Professor Adelman's views undoubtedly were heavily influenced by his experience working for du Pont on the *Cellophane* case.

135. *Id.* at 690–91. This point was later made by 2 AREEDA & TURNER, *supra* note 90, at 427–28.

suggested, as Adelman had argued, that there should be but one relevant market for all purposes.¹³⁶

*C. Other Merger Cases Between Du Pont-General Motors and
Brown Shoe*¹³⁷

Several other merger cases from the late 1950s and very early 1960s are of note. In the late 1950s, the cases tended to follow the lead of *Bethlehem Steel* and looked mainly to *du Pont-General Motors* for guidance on market delineation. The one important exception was *American Crystal Sugar Co. v. Cuban-American Sugar Co.*,¹³⁸ which was decided before *Bethlehem Steel*. That case arose when one sugar producer acquired a substantial block of stock in another, and the latter sought an injunction against efforts by the former to gain control.¹³⁹ The injunction was granted by the district court, and it was affirmed on appeal.¹⁴⁰

The plaintiff sold beet sugar, and the defendant sold cane sugar in the same general area.¹⁴¹ The defendant argued that beet and cane sugar traded in separate markets because customers preferred cane sugar and it had a higher price.¹⁴² The district court largely rejected the factual predicate for this argument and went on to state that beet and cane sugar could be shown to be in separate markets only by evidence "that within a given range of prices consumers would not shift from one to the other."¹⁴³ This appears to have been a rendition of the *Cellophane* test. Citing transportation costs as a critical factor, the court found that a ten-state area in which the two firms "concentrate their principal sales efforts" was the relevant geographic market.¹⁴⁴

The court of appeals generally affirmed the district court's opinion, including its determination of market delineation. The court cited "evidence

136. Lucile Sheppard Keyes, *The Bethlehem-Youngstown Case and the Market-Share Criterion*, 51 AM. ECON. REV. 643, 645-46 (1961).

137. For additional detailed discussion of the market delineation aspects of these cases, see BETTY BOCK, *MERGERS AND MARKETS: AN ECONOMIC ANALYSIS OF THE CASE LAW* 42-67 (1960) [hereinafter BOCK (1960)]; BETTY BOCK, *MERGERS AND MARKETS: A GUIDE TO ECONOMIC ANALYSIS OF CASE LAW* ch. 5 (2d ed. 1962) [hereinafter BOCK (1962)]; MASSEL, *supra* note 36, ch. 8; Handler & Robinson, *supra* note 26, at 641-51. For additional details on other aspects of the cases, see BOCK (1962), *supra*, ch. 6; Lewyn & Mann, *supra* note 113.

138. 152 F. Supp. 387 (S.D.N.Y. 1957), *aff'd*, 259 F.2d 524 (2d Cir. 1958).

139. *Id.* at 389, 393-94.

140. *Id.* at 400; *American Crystal Sugar Co. v. Cuban-American Sugar Co.*, 259 F.2d 524, 531-32 (2d Cir. 1958).

141. *American Crystal*, 152 F. Supp. at 390-91.

142. *Id.* at 398.

143. *Id.* at 399.

144. *Id.* at 397-98.

that in certain areas the [price] differential no longer exists."¹⁴⁵ The court then went on to emphasize:

There was evidence that a change in the price of one produces an equivalent and corresponding change in the price of the other. Sensitivity to price change, not price differential, is usually regarded as a proper element to measure cross-elasticity of demand. Although there was some evidence that soft drink manufacturers are reluctant to use beet sugar, almost all the testimony supported the trial court's finding of substantially complete functional interchangeability, under the tests laid down in the [*Cellophane*] case, as the defendant conceded.¹⁴⁶

Thus, the court of appeals clearly adopted the *Cellophane* test and applied it in a sensible manner. The court affirmed the geographic market determination primarily on the basis of transportation cost advantages.¹⁴⁷

Another decision predating *Bethlehem Steel* was the FTC's administrative decision in *In re Crown Zellerbach Corp.*¹⁴⁸ The case arose from the merger of two producers of various types of papers—Crown Zellerbach and St. Helens Pulp & Paper.¹⁴⁹ With only a brief and cryptic explanation, adopting the test of neither *Cellophane* nor *du Pont-General Motors*, the Commission found that the relevant market was a group of coarse papers in eleven western states.¹⁵⁰ The Commission also found the merger unlawful and ordered divestiture.¹⁵¹

The case was decided on appeal by the Ninth Circuit after the *Bethlehem Steel* decision.¹⁵² Petitioner urged the court to adopt a broader market because the paper-making machines operated by St. Helens could easily be used to produce papers not in the Commission's market.¹⁵³ The court rejected the use of supply substitutability to enlarge the product market, relying on *Bethlehem Steel*.¹⁵⁴ The court also followed *Bethlehem Steel* in distinguishing market delineation under Section 7 from market delineation

145. *American Crystal*, 259 F.2d at 529–30.

146. *Id.* at 530 (citation to *Cellophane* omitted).

147. *Id.* at 529.

148. 54 F.T.C. 769 (1957), *aff'd*, 296 F.2d 800 (9th Cir. 1961), *cert. denied*, 370 U.S. 937 (1962). For a discussion of the market delineation issues in this case, see Stephen Mann & Thomas M. Lewyn, Comment, *The Relevant Market Under Section 7 of the Clayton Act: Two New Cases—Two Different Views*, 47 VA. L. REV. 1014 (1961).

149. *Crown Zellerbach*, 54 F.T.C. at 769–75, 798–99.

150. *Id.* at 800–02.

151. *Id.* at 808–09.

152. *Crown Zellerbach Corp. v. FTC*, 296 F.2d 800 (9th Cir. 1961), *cert. denied*, 370 U.S. 937 (1962).

153. *Id.* at 812–14.

154. *Id.* at 812–13.

under Section 2, citing the result in *du Pont-General Motors* to illustrate the point.¹⁵⁵ In the end, the court affirmed the Commission's product market on two grounds. One was that it followed the grouping of products used by the Census in compiling statistical data.¹⁵⁶ The other reason was customer oriented:

[T]he customers of St. Helens, and the customers of Crown, in ordering and purchasing papers designated as wrapping paper, shipping sack paper, bag paper, envelope paper, etc., by that very fact, demonstrate and create a market for those specific products so that they collectively may properly identify the relevant market here involved.¹⁵⁷

This statement, however, does not begin to explain either why these coarse papers were grouped in a single relevant market or why other coarse papers were excluded from it.

The court of appeals found that the geographic market was limited to the three Pacific Coast states because mills there could supply customers more promptly than mills outside the area and because St. Helens sold primarily in that area.¹⁵⁸ The court of appeals also affirmed the divestiture order.¹⁵⁹

In four cases decided after *Bethlehem Steel*, the FTC relied on *du Pont-General Motors* but not *Cellophane*.¹⁶⁰ In *In re Erie Sand & Gravel Co.*,¹⁶¹ the Commission held that "lake sand is a sufficiently distinct product to be considered a 'line of commerce' within the meaning of Section 7."¹⁶² The Commission did not cite *du Pont-General Motors*, but its reliance is self evident.

In *In re Reynolds Metals Co.*,¹⁶³ the Commission relied on *du Pont-General Motors* in holding that decorative aluminum foil sold to the florist

155. *Id.* at 814-15.

156. *Id.* at 813.

157. *Id.* at 815.

158. *Id.* at 817-18.

159. *Id.* at 833. The Commission had suggested that this smaller area was a relevant market, but ultimately adopted the larger area. *In re Crown Zellerbach Corp.*, 54 F.T.C. 769, 802 (1957), *aff'd* 296 F.2d 800, 802 (9th Cir. 1961), *cert. denied*, 370 U.S. 937 (1962).

160. In remanding another case to the hearing examiner before *Bethlehem Steel*, the Commission also adopted the *du Pont-General Motors* test. *See Brillo Mfg. Co.*, 54 F.T.C. 1905, 1906 (1958).

161. 56 F.T.C. 437 (1959), *vacated and remanded*, 291 F.2d 279 (3d Cir. 1961).

162. *Id.* at 453. The court of appeals had some difficulty with this holding in light of *Cellophane* but found that lake sand and pit sand were separated by sufficient distance to be in separate markets. *Erie Sand & Gravel Co. v. FTC*, 291 F.2d 279, 281-83 (3d Cir. 1961). For a discussion of the market delineation issues in this case, see Mann & Lewyn, *supra* note 148.

163. 56 F.T.C. 743 (1960), *aff'd*, 309 F.2d 223 (D.C. Cir. 1962).

trade was the relevant market.¹⁶⁴ The Commission also noted that the price of this product was lower than that of, and fluctuated independently of, similar foil sold for other uses.¹⁶⁵ This may be the first time that price discrimination was explicitly relied upon as a basis for market delineation, although commentators had twice previously made the point.¹⁶⁶

In *In re A.G. Spalding & Bros., Inc.*,¹⁶⁷ the Commission found that the relevant markets were various price ranges for baseballs, basketballs, footballs, and boxing gloves.¹⁶⁸ The different price ranges were separate markets because the price differences reflected quality differences and related to differences in use.¹⁶⁹ In addition, the Commission found that "the athletic goods industry as a whole constitutes a line of commerce within the meaning of Section 7," citing and adopting the reasoning of *Bethlehem Steel*.¹⁷⁰ In a lengthy but not very insightful discussion, the court of appeals affirmed all of the market delineations.¹⁷¹ The court found both that there was "no such interchangeability" between the different price ranges for individual products and that "there were significant competitive interrelationships between athletic products as a group to justify the recognition of the athletic goods industry as a line of commerce."¹⁷² The reasoning is dubious. It suggests that baseballs selling for less than \$9 per dozen were not good substitutes for baseballs selling for \$9 to \$16.80 per dozen, but baseballs were good substitutes for footballs.

Finally, in *In re Union Carbide Corp.*,¹⁷³ the Commission confronted the argument that polyethylene film could not be a relevant market because, under *Cellophane*, it was just one of the many flexible packaging materials.¹⁷⁴ The Commission held otherwise, relying primarily on *du Pont-General Motors*.¹⁷⁵ The Commission presented a plausible argument that polyethylene film had physical characteristics superior to those of substitutes and generally was also lower in price, so it constituted a relevant mar-

164. *Id.* at 770-71.

165. *Id.* at 772. In an opinion rendered after the Supreme Court's decision in *Brown Shoe*, the court of appeals affirmed. *Reynolds Metals Co. v. FTC*, 309 F.2d 223 (D.C. Cir. 1962). The appellate court relied on the criteria established by the Supreme Court in *Brown Shoe* and on the fact that foil was sold to florists at a lower price. *Id.* at 226-29.

166. See Barnes, *supra* note 108, at 610-11; Turner, *supra* note 25, at 311.

167. 56 F.T.C. 1125 (1960), *aff'd*, 301 F.2d 585 (3d Cir. 1962).

168. *Id.* at 1157-60.

169. *Id.*

170. *Id.* at 1160.

171. *A.G. Spalding & Bros., Inc. v. FTC*, 301 F.2d 585, 591-606 (3d Cir. 1962).

172. *Id.* at 601, 605.

173. 59 F.T.C. 614 (1961).

174. *Id.* at 653.

175. *Id.*

ket even though there was some competition with other flexible packaging materials.¹⁷⁶

Four Justice Department cases decided during this period also deserve mention. In *United States v. Brown Shoe Co.*,¹⁷⁷ the district court¹⁷⁸ adopted the "peculiar characteristics and uses" test of *du Pont-General Motors*.¹⁷⁹ After reviewing relevant precedent on market delineation, the court concluded that relevant markets "cannot be determined by any process of logic and should be determined by the processes of observation. . . . In other words, determine how the industry itself and how the users, the public, treat the shoe product."¹⁸⁰ Ultimately, the court settled on men's, women's, and children's shoes as relevant markets, holding that this was a classification "understood and recognized by the entire industry and the public."¹⁸¹ The court also found significant the fact that these three categories of shoes were manufactured in separate plants, apparently rejecting on this basis any expansion of the markets because of supply substitutability.¹⁸² The court rejected defendants' argument for narrower markets based on price and quality because the broader market met the "peculiar characteristics and uses" test.¹⁸³ This is an entirely inadequate basis, and the court cited no reason for rejecting the narrower markets. The court found that the relevant geographic market for shoe manufacturing was the United States and that the relevant geographic markets for shoe retailing were cities of over ten thousand population plus the "immediate and contiguous surrounding area."¹⁸⁴ In these markets, the court found Section 7 to be violated.¹⁸⁵

In *United States v. Koppers Co.*,¹⁸⁶ the government challenged the acquisition of a firm that produced disc-type flexible couplings by a firm that produced gear-type flexible couplings, both of which were used to join together rotating shafts in machinery.¹⁸⁷ The defendants contended that their couplings did not actually compete with one other and could not sensibly be

176. *Id.* at 654-55.

177. 179 F. Supp. 721 (E.D. Mo. 1959), *aff'd*, 370 U.S. 294 (1962).

178. The Supreme Court's treatment of this case on appeal is discussed in detail below. See *infra* notes 241-62 and accompanying text.

179. *Brown Shoe*, 179 F. Supp. at 729.

180. *Id.* at 730.

181. *Id.* at 732.

182. *Id.* at 731.

183. *Id.* at 732.

184. *Id.* at 732-35.

185. *Id.* at 735-41.

186. 202 F. Supp. 437 (W.D. Pa.), *appeal dismissed*, 371 U.S. 856 (1962).

187. *Id.* at 437-38.

placed in the same market.¹⁸⁸ The court agreed that defendants' products did not compete with one another. Nevertheless, the court illogically held that all flexible couplings were recognized as a distinct class of products and had "sufficient peculiar characteristics and uses . . . to make them a line of commerce within the meaning of the Clayton Act."¹⁸⁹

In *United States v. Columbia Pictures Corp.*,¹⁹⁰ the district court rejected the government's alleged market for distribution of feature films to television.¹⁹¹ The court also held that the market delineation test of *Cellophane* and *du Pont-General Motors* were "but different verbalizations of the same criterion."¹⁹² The court went on to explain that the issue is the "degree of competition between products which must be found to exist before they may be considered in the same line of commerce."¹⁹³ According to the court, that issue should be decided by considering: "(1) degree of price sensitivity, (2) cross-elasticity of demand, (3) extent to which substitution occurs, (4) the manner in which the products are sold, and (5) the manner in which purchasers choose and buy. Statistical evidence can rarely, if ever, supply all the facts needed for a definitive judgment."¹⁹⁴ Measured against these criteria, the government's evidence of "peculiar characteristics and uses" was found wanting.¹⁹⁵

Finally, in *United States v. Philadelphia National Bank*,¹⁹⁶ the government brought suit to enjoin the merger of two commercial banks.¹⁹⁷ The government advocated the market delineation test of *du Pont-General Motors*, while the defendants advocated the *Cellophane* test.¹⁹⁸ Relying on *Columbia Pictures*, the district court¹⁹⁹ held that the two tests were "nothing more than expressions of the same rule in different language."²⁰⁰ The government contended that the relevant product markets were nine different

188. *Id.* at 438-41.

189. *Id.* at 440-41.

190. 189 F. Supp. 153 (S.D.N.Y. 1960).

191. The case involved a licensing arrangement that was treated as an acquisition under Section 7. *Id.* at 156, 158-59, 181-83.

192. *Id.* at 183-84.

193. *Id.* at 185.

194. *Id.*

195. *Id.* at 185-92.

196. 201 F. Supp. 348 (E.D. Pa. 1962), *rev'd*, 374 U.S. 321 (1963).

197. *Id.* at 350, 354-55. The merger was challenged under both Section 7 of the Clayton Act and the Sherman Act. The district court found no violation under either statute. *Id.* at 353, 364, 368-69.

198. *Id.* at 361.

199. The Supreme Court's treatment of this case on appeal is discussed in detail below. See *infra* notes 296-99, 310-16 and accompanying text.

200. *Philadelphia Nat'l Bank*, 201 F. Supp. at 362.

categories of banking services, such as "commercial and industrial loans" and "demand deposits" (checking).²⁰¹ The defendants proposed similar markets, but they emphasized that institutions other than commercial banks (such as insurance companies) produced substitute goods that should be included in these various markets.²⁰² The court held that the relevant product market was "commercial banking," stating:

It is the conglomeration of all the various services and functions that sets the commercial bank off from other financial institutions. Each item is an integral part of the whole, almost every one of which is dependent upon and would not exist but for the other. The Court can perceive no useful purpose here in going any further than designating commercial banking a separate and distinct line of commerce within the meaning of the statute.²⁰³

The government contended that the relevant geographic market was the four-county area around Philadelphia. The court rejected this on the basis of defendants' evidence that these counties accounted for as little as 49% and no more than 83.1% of their business for particular services.²⁰⁴

*D. International Boxing Club of New York, Inc. v. United States*²⁰⁵ and *Tampa Electric Co. v. Nashville Coal Co.*²⁰⁶

Two nonmerger Supreme Court decisions rendered in the late 1950s and early 1960s also are relevant. *International Boxing Club* addressed allegations of conspiracy in, and monopolization of, the promotion and broadcasting of championship boxing contests.²⁰⁷ Relying on *Cellophane*, defendants challenged the district court's determination of the relevant market—promotion of championship boxing contests—and argued that the market should include all boxing contests.²⁰⁸ The Court found that differences in revenues, television ratings, and the like were sufficient to sustain the narrower market under the *Cellophane* standard,²⁰⁹ thus making it clear that broad markets are not the inevitable result of the test. The Court also found that the narrow market could be based on the *du Pont-General Mo-*

201. *Id.* at 361.

202. *Id.* at 361–63.

203. *Id.* at 363.

204. *Id.* at 363–64. The court did not find that any particular area was the relevant geographic market but indicated that it would include the greater part of the northeastern United States. *Id.* at 364.

205. 358 U.S. 242 (1959).

206. 365 U.S. 320 (1961).

207. 358 U.S. at 244–49.

208. *Id.* at 249.

209. *Id.* at 250–52.

tors test,²¹⁰ suggesting that the two tests were consistent and that the *du Pont-General Motors* test was not a special test applicable only under Section 7.

Tampa Electric concerned a requirements contract²¹¹ challenged under Section 3 of the Clayton Act.²¹² The Court held that the contract would violate the statute only if it foreclosed "competition in a substantial share of the line of commerce affected."²¹³ The Court then proceeded to consider in general terms the scope of the relevant market, or "area of effective competition"²¹⁴ as the court termed it, by examining the "area in which the seller operates, and to which the purchaser can practicably turn for supplies."²¹⁵ The Court found that this area was quite large and reversed the lower court's determination that the contract was unlawful.²¹⁶ The Supreme Court shortly thereafter adopted this vague dictum as the test for determining geographic markets in merger cases,²¹⁷ and lower courts continue to invoke this dictum.²¹⁸

E. Other Commentary on Market Delineation, 1956-62

Several additional scholarly works on market delineation during the period are worthy of note. Irston Barnes was the first economist in a government enforcement agency to commit to print a substantial discussion on

210. *Id.* at 252 n.8.

211. 365 U.S. at 321-25.

212. Section 3 of the Clayton Act, 15 U.S.C. § 14 (1988), prohibits certain contracts that substantially lessen competition or tend to create a monopoly in any line of commerce. See *Tampa Electric* 365 U.S. at 325-27.

213. 365 U.S. at 327.

214. *Id.* at 328.

215. *Id.* at 327. The Court cited a similar dictum in an earlier Clayton Section 3 case. See *Standard Oil of Cal. v. United States*, 337 U.S. 293, 299 n.5 (1949).

216. *Tampa Electric*, 365 U.S. at 330-35.

217. *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 359 (1983).

218. Since the issuance of the 1982 Merger Guidelines, eight of the twelve regional courts of appeals have invoked this dictum. See *Baxley-DeLamar Monuments, Inc. v. American Cemetery Ass'n*, 938 F.2d 846, 851 (8th Cir. 1991); *Thompson v. Metropolitan Multi-List, Inc.*, 934 F.2d 1566, 1573 (11th Cir. 1991), *cert. denied sub nom. DeKalb Bd. of Realtors, Inc. v. Thompson*, 113 S. Ct. 295 (1992); *United States v. Rockford Memorial Corp.*, 898 F.2d 1278, 1283 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990); *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490, 495 (4th Cir. 1986), *cert. denied*, 481 U.S. 1050 (1987); *Jayco Sys., Inc. v. Savin Business Machs. Corp.*, 777 F.2d 306, 319 (5th Cir. 1985), *cert. denied*, 479 U.S. 816 (1986); *Wyoming Bancorporation v. Board of Governors of the Fed. Reserve*, 729 F.2d 687, 689 (10th Cir. 1984); *White & White, Inc. v. American Hosp. Supply Corp.*, 723 F.2d 495, 501 (6th Cir. 1983); *Borough of Lansdale v. Philadelphia Elec. Co.*, 692 F.2d 307, 311 (3d Cir. 1982).

market delineation.²¹⁹ He argued that a "market is not adequately described for the purpose of analyzing the effects of a merger until the principal firms on the demand and supply sides of the market have been identified and their positions with respect to competition in the market have been understood."²²⁰ This statement is notable in two respects. First, it incorporates supply as well as demand substitutability, as many courts had refused to do in this era. Second, it is extraordinarily vague—far less precise than *Cellophane*. Barnes went on to elaborate usefully on the pitfalls of delineating markets that are too narrow and too broad,²²¹ but he did not indicate how to avoid those pitfalls. Finally, Barnes posed the questions as to whether different price ranges of a product might be relevant markets and whether imperfect substitutes should be combined into a single market,²²² but again, he offered no guidance as to how to answer them.

The economist-lawyer team of Hale and Hale, assessing the case law as of 1958, argued: "[T]here is no disguising the fact that the legal tests applied in most of the reported decisions are basically irrational, arbitrary and hopelessly confused. It is also clear that economic theory offers little in the way of a scientific method upon which the law could be reconstructed."²²³

In 1960, Betty Bock²²⁴ summarized the merger decisions after the Celler-Kefauver amendment to the Clayton Act in 1950.²²⁵ Part of her summary was a categorization of the "tests" courts had applied for product market delineation.²²⁶ Bock identified nine tests in all: (1) "Peculiar characteristics and uses" used in *du Pont-General Motors*, *Bethlehem Steel*, *Erie Sand & Gravel*, *Reynolds Metals*, and *Spalding*; (2) "[d]istinguishing physical characteristics" used in *Crown Zellerbach*, *Bethlehem Steel*, *Reynolds Metals*, and *Spalding*; (3) "[d]istinct customers" used in *Bethlehem Steel*, *Crown Zellerbach*, *Erie Sand & Gravel*, and *Reynolds Metals*; (4) "[d]istinct prices" used in *Reynolds Metals* and *Spalding*; (5) "[s]tandardization" used in *Bethlehem Steel*; (6) "[i]nterchangeability" used in *du Pont-General Motors*, *American Crystal Sugar*, *Bethlehem Steel*, and *Brown Shoe*; (7) "[s]ensitivity to price changes" used in *American Crystal Sugar*; (8) "[l]arge and specialized investment" used in *Bethlehem Steel*; and (9) "[r]ecognition

219. Irston R. Barnes, *Markets, Competition, and Monopolistic Tendencies in Merger Cases*, 40 MARQ. L. REV. 141, 143-45, 157-58 (1956). At the time, Barnes worked for the FTC. He had previously worked for the Antitrust Division of the Justice Department. See *id.* at 141 n. **.

220. *Id.* at 144.

221. *Id.* at 144-45.

222. *Id.* at 157-58.

223. HALE & HALE, *supra* note 25, at 111.

224. BOCK (1960), *supra* note 137, at 42-67.

225. See *supra* notes 31-36 and accompanying text.

226. BOCK (1960), *supra* note 137, at 38-42.

as a separate industry" used in *Bethlehem Steel* and *Spalding*.²²⁷ The first and sixth tests were essentially those the Supreme Court established in *du Pont-General Motors* and *Cellophane*, and the second and seventh tests are difficult to distinguish from the first and sixth. The fifth and eighth tests were quite cryptic and derived from a single case.²²⁸ The third test, distinct customers, was largely a misnomer. Under that rubric, Bock included primarily reasons that had been cited by courts for not broadening markets on the basis of supply substitutability.²²⁹

The remaining two tests were important criteria not taken from Supreme Court precedent but applied by several courts. Industry recognition had been used to justify broad, industrywide markets, consisting of the aggregation of many smaller markets. Distinct prices had been used in two ways. In *Spalding*, different price and quality categories were found to be separate markets, and, in *Reynolds Metals*, price discrimination according to end use was the basis for holding a particular end use to constitute a relevant market.

In 1962, Mark Massel comprehensively reviewed antitrust market delineation.²³⁰ He found in the case law ten criteria for product market delineation: physical characteristics of products, end uses of products, attractiveness to buyers, cross-elasticity of demand, influences of sellers' costs, relative prices of goods, stages of marketing, integration and stages of manufacture, methods of production or origin, and actual and potential competition.²³¹ The second and third criteria were closely related to the first,²³² so the first four criteria were essentially those the Supreme Court established in *du Pont-General Motors* and *Cellophane*.

The fifth criterion, differences in costs, related to the possibility that a substitute, which otherwise would be in the relevant market, would not be if its cost was significantly higher than those products included in the market.²³³ The sixth criterion, relative prices of goods, related to the delineation of markets on the basis of price and quality differences among

227. *Id.* at 27-35. Bock also compiled such a list of tests for geographic market delineation. *Id.* at 38-42. In a second edition published in 1962, Bock added a couple of cases, but made only one significant change, the deletion of the eighth test. See BOCK (1962), *supra* note 137, at 58-68.

228. See *supra* note 227 and accompanying text.

229. BOCK (1960), *supra* note 137, at 30-31.

230. MASSEL, *supra* note 36, ch. 8.

231. *Id.* at 241-51.

232. *Id.* at 242-44.

233. *Id.* at 245-46. As the sole example, Massel cited *United States v. Corn Prods. Ref. Co.*, 234 F. 964 (S.D.N.Y. 1916), *appeal dismissed*, 249 U.S. 621 (1919). MASSEL, *supra* note 36, at 245-46; see also *supra* note 26 and accompanying text.

functionally similar products.²³⁴ The seventh and eighth criteria related to the fact that relevant markets may be different depending on the point at which competition is considered (manufacturing, wholesaling, or retailing).²³⁵ Finally, "actual and potential competition" referred to supply substitutability.²³⁶ Massel also argued, as Turner had,²³⁷ that it is appropriate to consider both broad and narrow markets in merger cases.²³⁸

III. SUPREME COURT CASES ON ANTITRUST MARKET DELINEATION BETWEEN 1962 AND 1970 AND THE 1968 MERGER GUIDELINES

A. *Brown Shoe Co. v. United States*

*Brown Shoe Co. v. United States*²³⁹ was the first horizontal merger case brought under the amended Section 7 to reach the Supreme Court on its merits, and was thus destined to be important for reasons having nothing to do with market delineation. Its impact on market delineation, however, would be especially important because the Court had an opportunity to resolve the conflicting lower court interpretations of the market delineation test set forth in *du Pont-General Motors* and *Celephane*. Moreover, the Court's opinions in *du Pont-General Motors* and *Cellophane* each had the support of just four Justices.²⁴⁰ For this reason, *Brown Shoe* offered the prospect of the first true majority decision on market delineation.

In its 1962 opinion in *Brown Shoe*, the Court²⁴¹ held that *du Pont-General Motors*, *Cellophane*, and a host of lower court precedents on market delineation were all correct. In the Court's words:

The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it. However, within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes. [citing *du Pont-General Motors*] The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production

234. MASSEL, *supra* note 36, at 246.

235. *Id.* at 247-49.

236. *Id.* at 250.

237. See Turner, *supra* note 25, at 315 n.80; see also *supra* text accompanying note 107.

238. MASSEL, *supra* note 36, at 240, 273-74.

239. 370 U.S. 294 (1962).

240. See *supra* note 73; see also *supra* text accompanying notes 115-16.

241. Chief Justice Warren delivered the opinion, which was joined by Justices Black, Brennan, Douglas, and Stewart. Justice Clark filed a concurring opinion, and Justice Harlan filed a dissenting opinion. Justices Frankfurter and White took no part in the consideration of the case.

facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.²⁴²

This dictum gave birth to the submarket concept as an explanation for the delineation of markets within markets and resolved the seeming inconsistency between *du Pont-General Motors* and *Cellophane* by holding that the former involved such a submarket, while the latter involved "outer boundaries" of the market. This resolution suggested that market delineation in Section 7 cases was, indeed, different than that in Section 2 cases.²⁴³

The "practical indicia" dictum also sanctioned essentially every evidentiary criterion that had been applied by the lower courts. Five of the Court's seven indicia were virtually identical to those of *Betty Bock*.²⁴⁴ The two not in *Bock*'s list were unique production facilities and specialized vendors. The former was relied on by the district court in *Brown Shoe*,²⁴⁵ in which the Court endorsed such a practice. The latter had no application to *Brown Shoe*,²⁴⁶ and there is little indication as to how the Court came to include it.²⁴⁷

Appended to the first sentence of this dictum was a footnote stating that "cross-elasticity of production facilities may also be an important factor in defining a product market within which a vertical merger is to be viewed."²⁴⁸ It is doubtful, however, that the Court meant to limit the relevance of supply substitutability to vertical mergers. The Court considered the vertical aspects of the merger first, so it initially considered market delineation in that context. In addition, the practical indicium of unique production facilities seems to go to the issue of supply substitutability. On the other hand, the Court did not enlarge the relevant market on the basis of supply substitutability.

242. *Brown Shoe*, 370 U.S. at 325 (footnotes omitted).

243. See David D. Martin, *The Brown Shoe Case and the New Antimerger Policy*, 53 AM. ECON. REV. 340, 348 (1963); Upshaw, *supra* note 25, at 467. Several economists were prompted by *Brown Shoe* to argue that markets should not be delineated differently under Section 7 and Section 2; see also Bryce J. Jones, *The Brown Shoe Case and the New Antimerger Policy: Comment*, 54 AM. ECON. REV. 407, 408 (1964); H.O. Stekler, *Market Definitions and the Antitrust Laws*, 9 ANTITRUST BULL. 741 (1964).

244. *Bock* (1960), *supra* note 137, at 27-35; see also *supra* note 227 and accompanying text. The district court found that the retail establishments sometimes were specialized and sometimes were not. *United States v. Brown Shoe Co.*, 179 F. Supp. 721, 729 (E.D. Mo. 1959), *aff'd*, 370 U.S. 294 (1962). The Supreme Court repeated this finding. *Brown Shoe*, 370 U.S. at 336.

245. *Brown Shoe*, 179 F. Supp. at 731.

246. *Brown Shoe*, 370 U.S. at 325 n.43.

247. The submarket concept and the Court's practical indicia dictum are considered in greater detail below. See discussion *infra* text accompanying notes 343-78.

248. *Brown Shoe*, 370 U.S. at 325 n.42. The court cited *United States v. Columbia Steel Co.*, 334 U.S. 495, 510-11 (1948), which had a similar holding. See *supra* notes 28-30 and accompanying text.

The Court then turned to the issue at hand:

Applying these considerations to the present case, we conclude that the record supports the District Court's finding that the relevant lines of commerce are men's, women's, and children's shoes. These product lines are recognized by the public; each line is manufactured in separate plants; each has characteristics peculiar to itself rendering it generally noncompetitive with the others; and each is, of course, directed toward a distinct class of customers.²⁴⁹

Although one of the practical indicia was distinct prices, the Court agreed "with the District Court that in this case a further division of product lines based on 'price/quality' differences would be 'unrealistic.'"²⁵⁰ The Court conceded that price and quality differences "may be of importance in determining the likely effect of a merger," but explained that "the boundaries of the relevant market must be drawn with sufficient breadth to include the competing products of each of the merging companies and to recognize competition where, in fact, competition exists."²⁵¹ The Court's rationale is difficult to understand. It appears that the essential problem was that there is always competition at the margin, no matter how the lines are drawn. The Court held that it "would be unrealistic to accept Brown's contention that, for example, men's shoes selling below \$8.99 are in a different product market from those selling above \$9.00."²⁵² Thus, the Court seems to have adopted Joan Robinson's position that market boundaries could be drawn only at marked gaps in the chain of substitutes.²⁵³

Defendants also argued that products within the district court's markets were not necessarily substitutable. In particular, it was argued that children's shoes should be further divided into sex and age groups. The Court held: "Further division does not aid us in analyzing the effects of this merger."²⁵⁴ The Court's reason was that the market shares would be about the same in each of the smaller markets, so the competitive analysis of the smaller markets would be the same as that of the larger ones.²⁵⁵

As to the geographic market the Court held:

249. *Brown Shoe*, 370 U.S. at 326.

250. *Id.*

251. *Id.* The record evidence has been read to suggest that there actually was very little competition between the merging firms. See John L. Peterman, *The Brown Shoe Case*, 18 J.L. & ECON. 81, 97 (1975).

252. *Brown Shoe*, 370 U.S. at 326. This reasoning was rightly criticized by 2 AREEDA & TURNER, *supra* note 90, at 420-21.

253. ROBINSON, *supra* note 17, at 17; see also *supra* note 18 and accompanying text.

254. *Brown Shoe*, 370 U.S. at 327.

255. *Id.* at 327-28.

The criteria to be used in determining the appropriate geographic market are essentially similar to those used to determine the relevant product market. Moreover, just as a product submarket may have § 7 significance as the proper "line of commerce," so may a geographic submarket be considered the appropriate "section of the country." Congress prescribed a pragmatic, factual approach to the definition of the relevant market and not a formal, legalistic one. The geographic market selected must, therefore, both "correspond to the commercial realities" of the industry and be economically significant.²⁵⁶

This was a fairly reasonable statement, but it provided precious little guidance.

Slightly more revealing was the Court's treatment of defendants' argument that the geographic markets delineated by the district court for retailing were too narrow in some instances and too broad in others.²⁵⁷ The Court affirmed the district court, holding that its markets were "large enough to include downtown shops and suburban shopping centers in areas contiguous to the city, which are the important competitive factors, and yet are small enough to exclude stores beyond the immediate environs of the city, which are of little competitive significance."²⁵⁸ Certainly, it makes sense to exclude from a relevant market products or areas that are of "little competitive significance." The Court could have, but did not, cite to *Times-Picayune Publishing Co. v. United States*²⁵⁹ for this proposition.²⁶⁰

Justice Harlan concurred in the judgment but declined to join the Court's opinion. Writing separately, he strongly argued that the Court had ignored substitutability in supply. "[T]aking into account the interchangeability of production," he argued, "the complete wearing-apparel shoe market . . . would seem a more realistic gauge of the possible anticompetitive effects" of the merger.²⁶¹

Justice Harlan also warned against the use of relevant markets delineated for the purpose of exaggerating the competitive effects of mergers:

256. *Id.* at 336-37 (citations omitted).

257. *Id.* at 338.

258. *Id.* at 339.

259. 345 U.S. 594 (1953).

260. See *supra* note 47 and accompanying text.

261. *Brown Shoe*, 370 U.S. at 367 (Harlan, J., dissenting in part and concurring in part). The most extensive factual discussion of the case in the economic or legal literature makes a similar argument for retailing, going even further to argue that the relevant market may have been all retailing. See Peterman, *supra* note 251, at 96. In a concurring opinion, Justice Clark argued that the relevant market included all shoes, but was not so clear as to the reasons. *Brown Shoe*, 370 U.S. at 356 (Clark, J., concurring).

The fact that § 7 speaks of the lessening of competition "in *any* line of commerce" (emphasis added) does not, of course, mean that the product market on which the effect of the merger is considered may be defined as narrowly or as broadly as the Government chooses to define it. . . . If the government were permitted to choose its "line of commerce" it could presumably draw the market narrowly in a case that turns on the existence *vel non* of monopoly power and draw it broadly when the question is whether both parties to a merger are within the same competitive market.²⁶²

Brown Shoe and its submarket concept was not well received by most commentators.²⁶³ Economists George Hall and Charles Phillips termed the submarket concept "an intellectual monstrosity" with "little economic justification."²⁶⁴ Lawyer William Upshaw argued that "the 'product sub-market' thesis" is based on a "subtle and deep-rooted error."²⁶⁵ Economist Bryce Jones argued:

It is within the broad market, not the submarket, that the stuff of price determination and competitive rivalry is found. . . . If the market definition in merger cases excludes some substitute products or if the market is defined so narrowly that it includes only those firms which happen to be selling in a given area, we cannot reasonably know whether the merger will damage competition; for the submarket approach will restrict us to an examination of only a segment of the market and only a part of the forces which determine price and firm behavioral patterns.²⁶⁶

The economist-lawyer team of Hale and Hale stated:

What is objectionable is the broadening and narrowing of product definitions in order to achieve desired results in calculating market shares, and in that connection it must be remarked that the notion of a submarket is an odd one: either there is or there is not a market in which competition may be affected. Enlarging and reducing the market concept, like opening and closing the iris of a camera over a concentric area, merely indicates indecision. If the line of commerce is men's shoes, it should not also be men's golf shoes: if one boundary is right, the other must be wrong.²⁶⁷

262. *Brown Shoe*, 370 U.S. at 367-68 & n.3 (Harlan, J., dissenting in part and concurring in part).

263. One exception was David D. Martin, *The Brown Shoe Case and the New Antimerger Policy: Reply*, 54 AM. ECON. REV. 413, 414 (1964); see also Martin, *supra* note 243, at 356.

264. George R. Hall & Charles F. Phillips, *Antimerger Criteria: Power, Concentration, Foreclosure and Size*, 9 VILL. L. REV. 211, 219-20 (1964).

265. Upshaw, *supra* note 25, at 461-62.

266. Jones, *supra* note 243, at 408.

267. G.E. Hale & Rosemary D. Hale, *A Line of Commerce: Market Definition in Anti-Merger Cases*, 52 IOWA L. REV. 406, 426 (1966).

Finally, economist Irston Barnes made two very important points in commenting on the case. First, market delineation is not really the first step in the competitive analysis of mergers. Before markets are delineated, it is essential to consider the nature of the competitive effects a merger might have in order to be able to sensibly delineate markets.²⁶⁸ Second, the various dimensions of markets are interrelated, so it is inappropriate to define separately product and geographic markets entirely.²⁶⁹

B. United States v. Aluminum Co. of America and United States v. Continental Can Co.

In 1964, the Supreme Court applied *Brown Shoe* in two merger cases. In *United States v. Aluminum Co. of America*,²⁷⁰ the government challenged Aluminum Company of America's ("Alcoa") acquisition of Rome Cable. Alcoa was a large producer of bare (uninsulated) aluminum conductor and a significant producer of insulated aluminum conductor. Rome Cable was a minor producer of insulated aluminum conductor and a trivial producer of bare aluminum conductor.²⁷¹ For overhead electric power transmission, utilities at the time were buying bare aluminum conductor almost exclusively, and there was no dispute that it was a relevant market. The major dispute was over whether all aluminum conductor also was a relevant market.²⁷²

The district court had found that insulated copper conductor was a good substitute for insulated aluminum conductor, so all aluminum conductor was not a relevant market.²⁷³ The Supreme Court acknowledged "competition between insulated aluminum conductor and its copper counterpart" but held that the "degree of competitiveness does not preclude

268. Irston R. Barnes, *The Primacy of Competition and the Brown Shoe Decision*, 51 GEO. L. J. 706, 726-27, 729-30 (1963). For a recent expansion on this point, see Gregory J. Werden, *Four Suggestions on Market Delineation*, 37 ANTITRUST BULL. 107, 108-12 (1992), which discusses two fairly recent cases in which courts failed to take this preliminary step and produced erroneous market delineations: *United States v. Syufy Enters.*, 712 F. Supp. 1386, 1396-1400 (N.D. Cal. 1989), *aff'd*, 903 F.2d 659 (9th Cir. 1990); *FTC v. Coca Cola Co.*, 641 F. Supp. 1128, 1132-33, 1140 (D.D.C. 1986), *vacated without op.*, 829 F.2d 191 (D.C. Cir. 1987). The former case was affirmed on appeal, but the court noted the error in market delineation. *Syufy Enters.*, 903 F.2d at 665-66 n.9.

269. Barnes, *supra* note 268, at 727-28.

270. 377 U.S. 271, *reh'g denied*, 377 U.S. 1010 (1964). Justice Douglas delivered the opinion of the Court, which was joined by Justices Black, Brennan, Clark, White, and Chief Justice Warren. Justice Stewart filed a dissent, which was joined by Justices Harlan and Goldberg.

271. *Id.* at 273-74.

272. *Id.* at 274-75.

273. *Id.*; *United States v. Aluminum Co. of Am.*, 214 F. Supp. 501, 509-10 (N.D.N.Y. 1963), *rev'd*, 377 U.S. 271, *reh'g denied*, 377 U.S. 1010 (1964).

their division for purposes of § 7 into separate submarkets.”²⁷⁴ The Court argued that insulated aluminum conductor is a poor substitute for insulated copper conductor in most applications, but in electric power distribution, aluminum was rapidly displacing copper because of its far lower price, and “the District Court found [that] aluminum and copper conductor prices do not respond to one another.”²⁷⁵ This, according to the Court, justified separating insulated aluminum and insulated copper conductor.²⁷⁶ The Court distinguished its refusal in *Brown Shoe* to delineate separate markets for various price ranges of shoes on the grounds that the price difference was larger and “to ignore price in determining the relevant line of commerce is to ignore the single, most important, practical factor in the business.”²⁷⁷

The Court then proceeded to hold that the “combination of bare and insulated aluminum conductor products into one market or line of commerce seems to us proper,” explaining only that “[b]oth types are used for the purpose of conducting electricity and are sold to the same customers, electric utilities.”²⁷⁸ The Court made no finding of competition between the two products.

In his dissenting opinion, Justice Stewart criticized the Court’s exclusion of copper conductor from the market as contrary to the findings of fact made by the district court,²⁷⁹ and he rightly criticized lumping together bare and insulated aluminum conductor as illogical and based on a “*non-sequitur*.”²⁸⁰ In addition, Justice Stewart argued that “there is complete manufacturing interchangeability between copper and aluminum,” so “supply flexibility . . . exerts a profound restraint upon an aluminum cable manufacturer’s power to achieve any sort of market advantage.”²⁸¹

In *United States v. Continental Can Co.*,²⁸² the government challenged the acquisition by Continental Can, a leading producer of metal containers, of Hazel-Atlas Glass, a leading producer of glass containers.²⁸³ The government sought divestiture, alleging a substantial lessening of competition

274. *Aluminum Co. of Am.*, 377 U.S. at 275.

275. *Id.* at 276.

276. *Id.* at 275–76; see also *Aluminum Co. of Am.*, 214 F. Supp. at 509.

277. *Aluminum Co. of Am.*, 377 U.S. at 276.

278. *Id.* at 275–76. For a useful discussion of the market delineation issue in this case, see Upshaw, *supra* note 25, at 469–77.

279. *Aluminum Co. of Am.*, 377 U.S. at 284–86 (Stewart, J., dissenting).

280. *Id.* at 286.

281. *Id.* at 285; see also *Aluminum Co. of Am.*, 214 F. Supp. at 509.

282. 378 U.S. 441 (1964). Justice White delivered the opinion of the Court, which was joined by Justices Black, Brennan, Clark, Douglas, and Chief Justice Warren. Justice Goldberg filed a concurring opinion and Justice Harlan filed a dissent, which was joined by Justice Stewart.

283. *Id.* at 443–47.

in relevant markets for containers of beer, soft drinks, and several other individual products.²⁸⁴ Although the district court found that there was competition among metal, glass, and plastic containers in these various uses, it held that it was not "the type of competition between products with reasonable interchangeability of use and cross-elasticity of demand which has Clayton Act significance."²⁸⁵

The Supreme Court disagreed. It found that there currently was, or had been, significant competition between metal and glass containers for baby food, soft drinks, beer, and other products.²⁸⁶ It held:

Interchangeability of use and cross-elasticity of demand are not to be used to obscure competition but "to recognize competition where, in fact, competition exists." *Brown Shoe Co. v. United States*, 370 U.S., at 326. In our view there is and has been a rather general confrontation between metal and glass containers and competition between them for the same end uses which is insistent, continuous, effective and quantitywise very substantial. . . . In differing degrees for different end uses manufacturers in each industry take into consideration the price of the containers of the opposing industry in formulating their own pricing policy. Thus, though the interchangeability of use may not be so complete and the cross-elasticity of demand not so immediate as in the case of most intraindustry mergers, there is over the long run the kind of customer response to innovation . . . that brings competition between these two industries within § 7's competition-preserving proscriptions.²⁸⁷

Consequently, the Court held that a relevant market for analyzing the competitive effects of the merger was metal and glass containers.²⁸⁸

Of course, there were containers other than those made of metal and glass, but the Court had no difficulty in excluding them from the relevant market:

284. *Id.* at 443-44, 447; see also *United States v. Continental Can Co.*, 217 F. Supp. 761, 778-79 (S.D.N.Y. 1963), *rev'd*, 378 U.S. 441 (1964). The Government had unsuccessfully tried to enjoin the merger in the first place. *Id.* at 765.

285. *Continental Can Co.*, 217 F. Supp. at 781-82.

286. *Continental Can Co.*, 378 U.S. at 450-52. Dictum in two later cases reinforced the Court's rationale: "[S]ubmarkets are not a basis for the disregard of a broader line of commerce that has economic significance." *United States v. Greater Buffalo Press, Inc.*, 402 U.S. 549, 554 (1971); *United States v. Phillipsburg Nat'l Bank & Trust Co.*, 399 U.S. 350, 360 (1970).

287. *Continental Can Co.*, 378 U.S. at 453-55 (footnotes omitted).

288. *Id.* at 457. The Court seems to have felt that the merger would escape the prohibition of Section 7, despite its anticompetitive effects, unless metal and glass containers were combined into a single market. See *id.* at 449. The statute, of course, does not necessitate that conclusion. For a suggested competitive analysis that does not involve combining the markets, see Gregory J. Werden, *Section 7 of the Clayton Act and the Analysis of "Semihorizontal" Mergers*, 27 ANTITRUST BULL. 135 (1982).

Nor are we concerned by the suggestion that if the product market is to be defined in these terms it must include plastic, paper, foil and any other materials competing for the same business. That there may be a broader product market made up of metal, glass and other competing containers does not necessarily negative the existence of submarkets of cans, glass, plastic or cans and glass together, for "within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes."²⁸⁹

Justice Harlan, in his dissenting opinion, correctly argued that the Court's analysis was a "travesty of economics"²⁹⁰ that "simply reads the 'line of commerce' element out of § 7, and destroys its usefulness as an aid to analysis."²⁹¹

Not surprisingly, these two cases produced sharp commentary. The *Harvard Law Review's* account of the term concluded that "the Court appears to have taken a result-oriented approach to definition of the market, gerrymandering the boundaries 'so as to maximize the prospect of invalidating the challenged acquisition.'"²⁹² William Upshaw argued that, in these cases, the submarket concept was "a kind of universal solvent to be used to dissolve all forms of corporate consolidation."²⁹³ Current treatises similarly disapprove.²⁹⁴

C. The Cluster Market Concept

As noted above,²⁹⁵ the district court in *United States v. Philadelphia National Bank*²⁹⁶ dealt with the argument that various banking products and services face competition from nonbank financial institutions by holding that interdependencies among these products and services make commercial banking the relevant product market.²⁹⁷ The Supreme Court affirmed in 1963,²⁹⁸ but did so in confusing language suggesting that the

289. *Continental Can Co.*, 378 U.S. at 457-58 (quoting *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962)). For a useful discussion of the issues, see Upshaw, *supra* note 25, at 477-84.

290. *Continental Can Co.*, 378 U.S. at 472 (Harlan, J., dissenting).

291. *Id.* at 468.

292. *The Supreme Court, 1963 Term*, 78 HARV. L. REV. 143, 274-75 (1964).

293. Upshaw, *supra* note 25, at 425.

294. See 2 AREEDA & TURNER, *supra* note 90, at 421-24, 429; SULLIVAN, *supra* note 90, at 608-09.

295. See *supra* notes 196-203 and accompanying text.

296. 201 F. Supp. 348 (E.D. Pa. 1962), *rev'd*, 374 U.S. 321 (1963).

297. *Id.* at 363; see also *supra* text accompanying note 203.

298. *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321 (1963). Justice Brennan delivered the opinion of the Court, which was joined by Justices Black, Clark, Douglas, and Chief Justice Warren. Justice Harlan filed a dissent, which was joined by Justice Stewart. Justice

nonbank financial institutions were not sufficiently competitive for the individual services. In the Court's words:

[T]he cluster of products (various kinds of credit) and services (such as checking accounts and trust administration) denoted by the term "commercial banking" composes a distinct line of commerce. Some commercial banking products or services are so distinctive that they are entirely free of effective competition from products or services of other financial institutions Others enjoy such cost advantages as to be insulated within a broad range from substitutes furnished by other institutions. . . . Finally, there are banking facilities which, although in terms of cost and price they are freely competitive with the facilities provided by other financial institutions, nevertheless enjoy a settled consumer preference In sum, it is clear that commercial banking is a market "sufficiently inclusive to be meaningful in terms of trade realities."²⁹⁹

In using the word "cluster," the Court created a new market concept in antitrust: a market consisting of various nonsubstitutable products. The Court's rationale for clustering, however, was obscure. The Court clarified the concept to some extent in two later cases.

In *United States v. Grinnell Corp.*,³⁰⁰ the Court held that the relevant market consisted of accredited central station alarms services such as central station burglar alarms and fire alarms.³⁰¹ While the individual services were not competitive with each other, the Court held that they were in a single relevant market because "[c]entral station companies recognize that to compete effectively, they must offer all or nearly all types of service."³⁰² The point of this observation seems to be that complementarities in the production process for central station alarm services justified combining them into a single market.

Grinnell was a Sherman Act case, but the Court relied on its holding in *Philadelphia National Bank* because it saw "no reason to differentiate be-

Goldberg filed a separate memorandum. Justice White took no part in the consideration of the case.

299. *Id.* at 356-57.

300. 384 U.S. 563 (1966).

301. *Id.* at 571.

302. *Id.* at 572. This clustering was unimportant to the disposition of the case in that the market shares would have been roughly the same in markets for individual services. See *The Supreme Court, 1965 Term*, 80 HARV. L. REV. 91, 241 (1966).

On the other hand, the clustering may have been a device to justify limiting the market to central station alarm services, despite competition from other sorts of services (such as noncentral station alarms and night watchmen). Dissenting Justices Fortas and Stewart argued that there were good substitute services that should have been included in the market. *Grinnell*, 384 U.S. at 584-85, 590-94 (Fortas, J., dissenting).

tween 'line' of commerce in the context of the Clayton Act and 'part' of commerce for purposes of the Sherman Act."³⁰³ The Court held, as it had pointedly not done three years earlier in *Brown Shoe*, that the same principles of market delineation were applicable under the two statutes. Since this holding, market delineation precedents in Section 7 and Section 2 cases have been used interchangeably.³⁰⁴

Additional clarification was provided by *United States v. Phillipsburg National Bank & Trust Co.*³⁰⁵ The district court in that case had analyzed the effects of the merger on competition in individual banking products and services markets.³⁰⁶ The Supreme Court held this to be error, despite the availability of the submarket concept.³⁰⁷ The Court then proceeded to explain:

Commercial banks are the only financial institutions in which a wide variety of financial products and services—some unique to commercial banking and others not—are gathered together in one place. The clustering of financial products or services in banks facilitates convenient access to them for all banking customers. For some customers, full-service banking makes possible access to certain products or services that would otherwise be unavailable to them In short, the cluster of products and services termed commercial banking has economic significance well beyond the various products and services involved.³⁰⁸

While not entirely clear, the point of this discussion seems to be that complementarities on the purchasing of banking products and services justified combining them in a single market.³⁰⁹

303. *Grinnell Corp.*, 384 U.S. at 573.

304. See, e.g., *Thurman Indus., Inc. v. Pay 'N Pak Stores, Inc.*, 875 F.2d 1369, 1375 n.1 (9th Cir. 1989); *American Bearing Co. v. Litton Indus., Inc.*, 729 F.2d 943, 949 n.13 (3d Cir.), cert. denied, 469 U.S. 854 (1984); *Photovest Corp. v. Fotomat Corp.*, 606 F.2d 704, 712 (7th Cir. 1979), cert. denied, 445 U.S. 917 (1980). Also note that none of the cases cited *infra* note 517 invoking the *Brown Shoe* practical indicia were Section 7 cases. The only post-*Brown Shoe* case that distinguished market delineation under Section 7 from that under Section 2 appears to be *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 230 (E.D. Pa. 1976).

305. 399 U.S. 350 (1970).

306. *United States v. Phillipsburg Nat'l Bank & Trust Co.*, 306 F. Supp. 645, 648-51 (D.N.J. 1969), rev'd, 399 U.S. 350 (1970).

307. *Phillipsburg Nat'l Bank*, 399 U.S. at 360.

308. *Id.* at 360-61.

309. See Ian Ayres, *Rationalizing Antitrust Cluster Markets*, 95 YALE L.J. 109, 120-21 (1985).

D. Geographic Market Delineation

The bank merger cases discussed in the previous section also are interesting for their holdings on the geographic scope of the relevant market. The district court in *Philadelphia National Bank* rejected the government's four-county market as overly narrow.³¹⁰ The Supreme Court disagreed, holding:

The proper question to be asked in this case is not where the parties to the merger do business or even where they compete, but where, within the area of competitive overlap, the effect of the merger on competition will be direct and immediate. . . . In banking, as in most service industries, convenience of location is essential to effective competition. Individuals and corporations typically confer the bulk of their patronage on banks in their local community; they find it impractical to conduct their banking business at a distance. The factor of inconvenience localizes banking competition as effectively as high transportation costs in other industries.³¹¹

Applying the dictum of *Tampa Electric Co. v. Nashville Coal Co.*,³¹² the Court adopted the four-county area as the relevant geographic market.³¹³

In a footnote, the Court recognized that distant banks may compete for the business of some large customers, but held that the four-county area was "a valid geographical market in which to assess the anticompetitive effect of the proposed merger upon banking facilities available to the smaller customer."³¹⁴ The Court added that there was "artificiality in deeming the four-county area the relevant 'section of the country' so far as businessmen located near the perimeter are concerned. But such fuzziness would seem inherent in any attempt to delineate the relevant geographical market."³¹⁵

In the text, the Court acknowledged that competition was far more localized for some services and some customers than for others, and held in effect that the four-county area was the proper market for "bank customers

310. *United States v. Philadelphia Nat'l Bank*, 201 F. Supp. 348, 363-64 (E.D. Pa. 1962), *rev'd*, 374 U.S. 321 (1963).

311. *Philadelphia Nat'l Bank*, 374 U.S. at 357-58 (citations and footnotes omitted). To hold that the geographic market is the area in which "the effect of the merger on competition will be direct and immediate" suggests an abandonment of the market concept altogether. That, however, does not appear to be what the Court actually did. The factor of convenience certainly was a proper focus of the analysis, and the result was sensible. For a useful discussion of the issue, see Elzinga & Hogarty, *supra* note 15, at 56-59, 62-64, 69.

312. 365 U.S. 320, 327 (1961); *see also supra* notes 214-15 and accompanying text.

313. *Philadelphia Nat'l Bank*, 374 U.S. at 359-61.

314. *Id.* at 360 n.37.

315. *Id.*

that are neither very large nor very small."³¹⁶ This reasoning was quite sensible and perhaps even insightful, but it does seem rather inconsistent with the Court's holding that the relevant product market was the cluster of commercial banking services.

In *Phillipsburg National Bank*, the Court followed its lead in *Philadelphia National Bank* and again applied the *Tampa Electric* dictum.³¹⁷ The Court again stressed the factor of convenience and reversed the district court's market delineation.³¹⁸ The one notable difference is that, in this case, the Court concentrated on the small customer: "[T]he small borrower frequently cannot 'practicably turn for supplies' outside his immediate community; and the small depositor—because of habit, custom, personal relationships, and, above all, convenience—is usually unwilling to do so."³¹⁹ The Court also rejected defendants' contention that the Phillipsburg-Easton area, found to be the relevant geographic market by the court, was too small to be "economically significant."³²⁰

In *United States v. Grinnell Corp.*, the Court affirmed the lower court's determination that the relevant market for accredited central station alarm services was national, even though the "activities of an individual station are in a sense local as it serves, ordinarily, only that area which is within a radius of 25 miles."³²¹ The Court opted for the national market because of various multistate or national activities by defendants,³²² but the Court in no way suggested that there was any competition between one city and the next.³²³

In *United States v. Pabst Brewing Co.*,³²⁴ the Court reversed a district court decision³²⁵ dismissing a government merger challenge for failure to

316. *Id.* at 360-61.

317. *United States v. Phillipsburg Nat'l Bank & Trust Co.*, 399 U.S. 350, 362 (1970).

318. *Id.* at 362-65.

319. *Id.* at 364.

320. *Id.* at 365.

321. 384 U.S. 563, 575 (1966).

322. *Id.* at 575-76.

323. The Court's rationale was persuasively challenged by Justices Fortas and Stewart, the dissenting Justices in this case. *Id.* at 587-90 (Fortas, J., dissenting). It seems unlikely, however, that the issue was material to the outcome of the case. The evidence presented in the district court's opinion indicates that Grinnell was the only provider of central station alarm services in most of the local markets and faced limited competition from such providers in others. *United States v. Grinnell Corp.*, 236 F. Supp. 244, 249-50 (D.R.I. 1964), *aff'd in part and rev'd in part*, 384 U.S. 563 (1966).

324. 384 U.S. 546 (1966). Justice Black delivered the opinion for the Court, which was joined by Justices Brennan, Clark, Douglas, and Chief Justice Warren. Justices Fortas, Harlan, and White filed concurring opinions. Justice Harlan was joined by Justice Stewart.

325. *United States v. Pabst Brewing Co.*, 233 F. Supp. 475 (E.D. Wis. 1964), *rev'd*, 384 U.S. 546 (1966).

prove the relevant geographic market in which to assess the merger of two breweries. The Court chided the district court for requiring too much from the government, noting that the statute "does not call for the delineation of a 'section of the country' by metes and bounds as a surveyor would lay off a plot of ground."³²⁶ The Court also held that market delineation is subsidiary to the purpose of the statute—the prohibition of mergers that substantially lessen competition.³²⁷ Without specifically finding any relevant markets, the Court held that the evidence of concentration was sufficient to establish a Section 7 violation in any of several areas.³²⁸ In a concurring opinion, Justices Harlan and Stewart argued that the Court had "emasculate[d] the statutory phrase 'in any section of the country.'"³²⁹ They concurred in the result, however, because they thought that the government had made the necessary *prima facie* showing on the geographic market.³³⁰ If the Court did what Harlan and Stewart alleged,³³¹ it certainly was an aberration.

E. Market Delineation Under the 1968 Merger Guidelines

In 1966, Justice Stewart remarked that "in litigation under § 7, the Government always wins."³³² He could have said the government always wins on market delineation in merger cases, and, given the central role of market delineation, that is largely what he must have had in mind. Against this background, the Antitrust Division of the Department of Justice, under the leadership of Donald Turner, drafted the first Merger Guidelines. They were years in the making and finally released in 1968.

As a general matter, the 1968 Guidelines stated:

A market is any grouping of sales (or other commercial transactions) in which each of the firms whose sales are included enjoys some advantage in competing with those firms whose sales are not

326. *Pabst Brewing Co.*, 384 U.S. at 549.

327. *Id.* at 549–50.

328. *Id.* at 550–52.

329. *Id.* at 555 (Harlan, J., concurring).

330. *Id.* at 557–58. For a useful discussion of the market delineation issue in this case, see Elzinga & Hogarty, *supra* note 15, at 52–56, 61–62, 64–67, 69–72.

331. Many commentators have argued that the Court did just that. See 2 AREEDA & TURNER, *supra* note 90, at 414–15; RICHARD A. POSNER, ANTITRUST LAW: AN ECONOMIC PERSPECTIVE 130 (1976); SULLIVAN, *supra* note 90, at 611; Robert W. Cook, Comment, "Relevant Market" Under the Sherman and Clayton Acts as Affected by Recent Decisions of the Supreme Court, 1966 U. ILL. L. F. 1094; Russell J. Guglielmino, Note, *Section of the Country as a Subsidiary Issue in Litigation Brought Under Section 7 of the Clayton Act*, 52 CORNELL L.Q. 600 (1967); Note, *United States v. Von's Grocery Co. and United States v. Pabst Brewing Co.—Competition and the Geographic Market Under Section 7 of the Clayton Act*, 62 NW. U. L. REV. 58 (1967).

332. *United States v. Von's Grocery Co.*, 384 U.S. 270, 301 (1966) (Stewart, J., dissenting).

included. The advantage need not be great, for so long as it is significant it defines an area of effective competition among the included sellers in which the competition of the excluded sellers is, *ex hypothesi*, less effective. The process of market definition may result in identification of several appropriate markets in which to test the probable competitive effects of a particular merger.³³³

Elaborating on the "product dimension" of the market, the 1968 Guidelines stated:

The sales of any product or service which is distinguishable as a matter of commercial practice from other products or services will ordinarily constitute a relevant product market, even though, from the standpoint of most purchasers, other products may be reasonably, but not perfectly, interchangeable with it in terms of price, quality, and use. On the other hand, the sales of two distinct products to a particular group of purchasers can also appropriately be grouped into a single market where the two products are reasonably interchangeable for that group in terms of price, quality, and use. In this latter case, however, it may be necessary also to include in that market the sales of one or more other products which are equally interchangeable with the two products in terms of price, quality, and use from the standpoint of that group of purchasers for whom the two products are interchangeable.³³⁴

Elaborating on the "geographic dimension" of the market, the 1968 Guidelines stated:

The total sales of a product or service in any commercially significant section of the country (even as small as a single community), or aggregate of such sections, will ordinarily constitute a geographic market if firms engaged in selling the product make significant sales of the product to purchasers in the section or sections. The market need not be enlarged beyond any section meeting the foregoing test unless it clearly appears that there is no economic barrier (e.g., significant transportation costs, lack of distribution facilities, customer inconvenience, or established consumer preference for existing products) that hinders the sale from outside the section to purchasers within the section; nor need the market be contracted to exclude some portion of the product sales made inside any section meeting the foregoing test unless it clearly appears that the portion of sales in question is made to a group of purchasers separated by a substantial economic barrier from the purchasers to whom the rest of the sales are made.³³⁵

333. 1968 Merger Guidelines, *supra* note 7, § 3.

334. *Id.* § 3(i).

335. *Id.* § 3(ii).

The 1968 Merger Guidelines were a responsible effort to enunciate principles for market delineation in light of the recent Supreme Court precedent at the time. They insisted that the products and areas included in a market have some tangible competitive advantage over those excluded from it. They also resisted the temptation to use the submarket concept for the arbitrary grouping of products. Instead, they placed imperfect substitutes in the same relevant market only if equally good substitutes were included. Perhaps most notably, the 1968 Merger Guidelines did not mention the practical indicia.

On the other hand, requiring only some advantage for the included products or areas over those excluded is dubious, and for that the 1968 Guidelines were criticized. The first such criticism came from the Task Force on Productivity and Competition, a small group of economists and lawyers chaired by George Stigler, which submitted a report to President Nixon in 1969.³³⁶ The Task Force termed market delineation under the 1968 Guidelines "so loose and unprofessional as to be positively embarrassing."³³⁷ The Stigler Task Force cited an example of a local area that had a delivered price advantage over another of only one-half of one percent, and argued that the area with the small advantage is not a "meaningful local market," even though there is a barrier to competition from outside it.³³⁸ The Stigler Task Force concluded by stating that it would "be a decided improvement if the Guidelines were revised (at a minimum) to explain that a distant seller of a product must be included in the local market if a modest price increase in the local area—a price increase unrelated to his costs—would bring him in forthwith."³³⁹

Richard Posner, a member of the Stigler Task Force, repeated its major point, applied it to the delineation of the product dimensions of markets, and proposed a more specific addendum to solve the problem.³⁴⁰ Posner suggested that distant sellers should be excluded from a market only if they are forbidden by law from selling there or if they are at a delivered price disadvantage exceeding some specific threshold. For the threshold, Posner suggested "5 or more percent, depending on the absolute size of the market

336. Report of the Task Force on Productivity and Competition, *reprinted in* 1 J. REPRINTS FOR ANTITRUST L. & ECON. 827 (1969). The report carries a date of Feb. 18, 1969, implying that it was commissioned before President Nixon took office. Other members of the Task Force were Ward S. Bowman, Jr., Ronald Coase, Roger Cramton, Kenneth W. Dam, Raymon H. Mulford, Richard A. Posner, Peter O. Steiner, and Alexander L. Stott.

337. *Id.* at 846–47.

338. *Id.* at 847–48.

339. *Id.* at 848.

340. POSNER, *supra* note 331, at 131, 132–33; Richard A. Posner, *Oligopoly and the Antitrust Laws: A Suggested Approach*, 21 STAN. L. REV. 1562, 1598–1600 (1969).

in question."³⁴¹ Posner also criticized the 1968 Guidelines for failing to take into account supply substitutability.³⁴²

IV. MARKET DELINEATION IN THE LOWER COURTS AND THE SCHOLARLY LITERATURE, 1962-82

A. *Application of Brown Shoe by the Lower Courts, 1962-82*

In the two decades following the Supreme Court's decision in *Brown Shoe Co. v. United States*,³⁴³ the submarket concept and the practical indicia dominated thinking on market delineation in the lower courts. A comprehensive treatment of those cases is beyond the scope of this Article,³⁴⁴ but a cursory review suffices to demonstrate the application of the submarket concept and the practical indicia.

To a considerable extent, the submarket concept was a tool used by plaintiffs, particularly government enforcement agencies, to narrow the market and facilitate a finding that a merger was unlawful. A case that illustrates this concept is *United States v. Mrs. Smith's Pie Co.*,³⁴⁵ a merger case in which the government alleged that the relevant submarket was frozen dessert pies. The parties and the court agreed that there were many good substitutes. The government argued, however, that there was a relevant submarket consisting of just frozen dessert pies within the broader market including the substitutes as well. The court agreed.³⁴⁶

On occasion, *Brown Shoe* also proved useful to the government when it needed to broaden the relevant market. Illustrative is *United States v. Times Mirror Co.*,³⁴⁷ a merger case involving the merger of a major daily newspaper in Los Angeles with a small local daily in the same general area. Defendants argued that the merging newspapers were totally different and simply not in competition. They contended that, under the cross-elasticity-of-demand test used in *Brown Shoe* to delineate the outer boundaries of the market, the two papers were in separate markets.³⁴⁸ Incredibly, the court

341. POSNER, *supra* note 331, at 133; Posner, *supra* note 340, at 1600.

342. POSNER, *supra* note 331, at 132.

343. 370 U.S. 294 (1962); *see also supra* notes 239-69 and accompanying text.

344. The most comprehensive treatments are 4 EARL W. KINTNER, *FEDERAL ANTITRUST LAW* 367-403 (1984); 3 JULIAN O. VON KALINOWSKI, *ANTITRUST LAWS AND TRADE REGULATION* § 18.02[2] (1991).

345. 440 F. Supp. 220 (E.D. Pa. 1976).

346. *Id.* at 228; *see also* *United States v. American Technical Indus., Inc.*, 1974-1 Trade Cas. (CCH) ¶ 74,873 (M.D. Pa. 1974) (artificial Christmas trees not a market, but a submarket); *Elco Corp. v. Microdot Inc.*, 360 F. Supp. 741, 747 (D. Del. 1973) (metal plate connectors may not be a market, but they are a submarket).

347. 274 F. Supp. 606 (C.D. Cal. 1967), *aff'd per curiam*, 390 U.S. 712 (1968).

348. *Id.* at 615.

rejected this argument as inconsistent with *Brown Shoe's* submarket dictum and the practical indicia.³⁴⁹

The mechanical way in which the practical indicia typically were applied is graphically demonstrated by one court's own words: "It is clear that these seven criteria are litmus paper tests that must be held up against the proposed submarket in order to determine whether a relevant submarket exists. If a sufficient number of those indicia are present, a valid submarket has been established."³⁵⁰

The application of the individual practical indicia also is of interest.³⁵¹ The first of the practical indicia was industry or public recognition. Pre-*Brown Shoe* cases had used this factor as a justification for considering a broad, industry-wide market, generally in addition to narrower markets, despite a lack of competition among the products in the broader grouping.³⁵² *Brown Shoe*, of course, turned things around by adopting industry or public recognition as a criterion for delineating submarkets. Thus, after *Brown Shoe*, industry or public recognition tended to be invoked to justify a narrow market.³⁵³ One exception appears to be the *Times Mirror* case, in which the recognition of a daily newspaper industry was critical in producing a relevant market broad enough to encompass both merging firms.³⁵⁴

The principal types of evidence held relevant under the rubric of industry or public recognition were: the use of a product grouping for statistical purposes by the government or the industry;³⁵⁵ the existence of a trade asso-

349. *Id.* at 615-17.

350. *Harnischfeger Corp. v. Paccar, Inc.*, 474 F. Supp. 1151, 1155 (E.D. Wis.), *aff'd without opinion*, 624 F.2d 1103 (7th Cir. 1979).

351. Recall that, in *Brown Shoe*, the Court set forth practical indicia for delineating the boundaries of a submarket: (1) industry or public recognition of the submarket as a separate economic entity, (2) the products peculiar characteristics and uses, (3) unique production facilities, (4) distinct customers, (5) distinct prices, (6) sensitivity to price changes, and (7) specialized vendors. See *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962); see also text accompanying note 242.

352. See *supra* notes 128-29, 170, 189 and accompanying text.

353. See cases cited *infra* notes 355-59.

354. See *United States v. Times Mirror Co.*, 274 F. Supp. 606, 617 (C.D. Cal. 1967), *aff'd per curiam*, 390 U.S. 712 (1968).

355. See, e.g., *Beatrice Foods Co. v. FTC*, 540 F.2d 303, 308-09 (7th Cir. 1976) (Census compiled data for paint brushes and rollers together); *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220 (E.D. Pa. 1976) (statistics on frozen dessert pies compiled for industry use); *United States v. M.P.M., Inc.*, 397 F. Supp. 78, 87 (D. Colo. 1975) (Census compiled data for ready-mix concrete); *United States v. Citizen Publishing Co.*, 280 F. Supp. 978, 985-86 (D. Ariz. 1968) (Census compiled data for newspapers), *aff'd*, 394 U.S. 131 (1969); *United States v. Kimberly-Clark Corp.*, 264 F. Supp. 439, 453 n.17 (N.D. Cal. 1967) (Census compiled data for fine and coarse paper products); *United States v. Kennecott Copper Corp.*, 231 F. Supp. 95, 99 (S.D.N.Y.

ciation limited to sellers of a particular grouping of products;³⁵⁶ and references to a particular product grouping in the merging firm's documents, industry publications, or industry participants' testimony or everyday speech.³⁵⁷ Some courts, however, seemingly invoked industry or public recognition merely as an incantation, citing no evidence at all,³⁵⁸ and one invoked industry or public recognition with regard to evidence that would seem to have nothing to do with anyone's recognition of anything.³⁵⁹

All of the foregoing types of evidence on industry or public recognition have little, if anything, to do with the potential for market power. However, evidence that is relevant to the potential for market power occasionally was considered under the rubric of industry or public recognition. The

1964) (industry trade association compiled data for paper insulated power cable), *aff'd per curiam*, 381 U.S. 414 (1965).

Throughout this period it was well known that Census industries leave much to be desired as antitrust markets, because Census classification serves a very different purpose than antitrust market delineation and applies very different principles. See JOE S. BAIN, *INDUSTRIAL ORGANIZATION* 110-19 (1959); Maxwell R. Conklin & Harold T. Goldstein, *Census Principles of Industry and Product Classification, Manufacturing Industries*, in *BUSINESS CONCENTRATION AND PRICE POLICY* 15 (National Bureau of Economic Research 1955). More recently, it has become known that the divergence between Census industries and antitrust markets is quite substantial. See Russell W. Pittman & Gregory J. Werden, *The Divergence of SIC Industries from Antitrust Markets: Indications from Justice Department Merger Cases*, 33 *ECON. LETTERS* 283 (1990); Gregory J. Werden, *The Divergence of SIC Industries from Antitrust Markets: Some Evidence from Price Fixing Cases*, 28 *ECON. LETTERS* 193 (1988).

356. See, e.g., *M.P.M., Inc.*, 397 F. Supp. at 87 (ready-mix concrete has its own trade associations); *Citizen Publishing Co.*, 280 F. Supp. at 985-86 (newspapers have their own trade associations); *Times Mirror Co.*, 274 F. Supp. at 617 (daily newspaper business has its own trade association); cf. *United States v. American Technical Indus., Inc.*, 1974-1 Trade Cas. (CCH) ¶ 74,873, at 95,873 (M.D. Pa. 1974) (artificial Christmas tree firms not in trade association for natural trees).

357. See, e.g., *RSR Corp. v. FTC*, 602 F.2d 1317, 1321 (9th Cir. 1979) (industry distinguishes between primary and secondary lead), *cert. denied*, 445 U.S. 927 (1980); *United States v. Blue Bell, Inc.*, 395 F. Supp. 538, 544 (M.D. Tenn. 1975) (documents, advertising materials, and remarks of industry persons treat the sale of industrial rental garments as distinct); *Bowl Am. Inc. v. Fair Lanes, Inc.*, 299 F. Supp. 1080, 1089 (D. Md. 1969) (industry publications and annual reports consider modern bowling establishments to be different from older ones); *Kimberly-Clark Corp.*, 264 F. Supp. at 453 (industry catalogs and industry witnesses treat coarse paper as distinct).

358. See, e.g., *Photovest Corp. v. Fotomat Corp.*, 606 F.2d 704, 714 (7th Cir. 1977), *cert. denied*, 445 U.S. 917 (1980); *FTC v. Lancaster Colony Corp.*, 434 F. Supp. 1088, 1094 (S.D.N.Y. 1977); *United States v. Black & Decker Mfg. Co.*, 430 F. Supp. 729, 738 (D. Md. 1976); *United States v. Healthco, Inc.*, 387 F. Supp. 258, 260-61, 265 (S.D.N.Y.), *aff'd without opinion*, 535 F.2d 1243 (2d Cir. 1975); *United States v. Pennzoil Co.*, 252 F. Supp. 962, 972-73 (W.D. Pa. 1965).

359. See *Reynolds Metals Co. v. FTC*, 309 F.2d 223, 229 (D.C. Cir. 1962) ("[B]oth producer and consumer recognition of the florist foil submarket as a definite economic entity is clearly demonstrated by what appears to have been the election of other decorative foil converters not to serve the florist industry.").

best example is *General Foods Corp. v. FTC*,³⁶⁰ a merger case involving household steel wool. As evidence that this product was recognized "as a separate economic entity," the court cited "testimony of several household steel wool producers stating that they only looked to other steel wool producers in setting prices and in reaching marketing decisions."³⁶¹ While not dispositive, evidence of perceptions about competition certainly is highly probative.

The third of the practical indicia, unique production facilities, was applied by the courts in a fairly straightforward, literal manner. In justifying a particular market delineation, many courts have cited the fact that production of the putative relevant product requires facilities distinct from those used to produce substitutes.³⁶² Such evidence certainly is relevant to, though far from dispositive of, the issue of supply substitutability. However, by invoking this factor as one of many practical indicia, the courts apparently were oblivious to the fact that unique production facilities are immaterial if there are substitute goods in demand. Worse still, one court cited under the rubric of unique production facilities, the fact that machinery used to produce ready-mix concrete had no other uses, rather than the fact that other machinery cannot be used to produce ready-mix concrete.³⁶³ The fact actually cited by the court has nothing to do with whether supply substitutability would prevent producers of ready-mix concrete from exercising market power.

The fourth of the practical indicia, distinct customers, was used by the courts basically to identify whether the product filled a special demand.³⁶⁴

360. 386 F.2d 936 (3d Cir. 1967), *cert. denied*, 391 U.S. 919 (1968).

361. *Id.* at 941; *see also* *United States v. Acorn Eng'g Co.*, 1981-2 Trade Cas. (CCH) ¶64,197, at 73,712 (N.D. Cal. 1981) (merging firms view each other, and only each other, as competitors); *Blue Bell, Inc.*, 395 F. Supp. at 544 (discussing firms' perceptions of their competitors).

362. *See, e.g.*, *Beatrice Foods Co. v. FTC*, 540 F.2d 303, 308 (7th Cir. 1976) (production of aerosol and spray painting equipment is very different from the production of brushes and rollers); *Abex Corp. v. FTC*, 420 F.2d 928, 932 (6th Cir.) (sintered metal breaks involve technology entirely different from that for organic friction breaks), *cert. denied*, 400 U.S. 865 (1970); *General Foods Corp. v. FTC*, 386 F.2d 936, 943 (3d Cir. 1967) (steel wool production is unlike that of any household substitutes and requires machinery that must be custom made), *cert. denied*, 391 U.S. 919 (1968); *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 222-23 (E.D. Pa. 1976) (making frozen dessert pies requires freezing equipment); *United States v. Kennecott Copper Corp.*, 231 F. Supp. 95, 99 (S.D.N.Y. 1964) (specialized machines and technical know-how are needed to make paper insulated cable), *aff'd per curiam*, 381 U.S. 414 (1965).

363. *United States v. M.P.M., Inc.*, 397 F. Supp. 78, 87 (D. Colo. 1975).

364. *See, e.g.*, *Reynolds Metals Co. v. FTC*, 309 F.2d 223, 228-29 (D.C. Cir. 1962) (florists are distinct consumers of florist foil); *Acorn Eng'g Co.*, 1981-2 Trade Cas. (CCH) at 73,712 (prisons are distinct customers for vandal resistant plumbing fixtures); *Harnischfeger Corp. v. Paccar, Inc.*, 474 F. Supp. 1151, 1156-57 (E.D. Wis.), *aff'd without opinion*, 624 F.2d 1103 (7th Cir. 1979) (surface miners and very heavy earth moving contractors are distinct customers for large mining

This has some relevance to the issue of market power, but not necessarily a great deal. If all of a particular product is consumed by customers that have a strong preference for that particular product given the available substitutes and their prices, then there is ample reason for considering that product to be in a separate market. The same, however, could not be said if just some customers had the strong preference unless those customers could be discriminated against. Failing to appreciate this distinction, one court held:

Where an identifiable class of purchasers of a product has particular requirements for the product involved which differentiate that class from others purchasers of the product, it follows that an acquisition involving suppliers of that product will have a unique impact on that class of purchasers. Accordingly, their requirements for the product may delineate a market under Section 7.³⁶⁵

This is simply mistaken. Unless sellers can discriminate against the customers with the particular requirements, the existence of other customers, who can substitute, likely will protect from exploitation those who cannot. It seems that courts routinely assumed that price discrimination was possible without examining the facts.

The fifth of the practical indicia, distinct prices, was used very mechanically by the lower courts. Many courts used the fact that the putative relevant product sold for a higher price than substitutes as a basis for holding it to be in a distinct market.³⁶⁶ Other courts cited the fact that the putative relevant product sold for a lower price than substitutes as a basis for holding it to be in a distinct market.³⁶⁷ Both sorts of cases are troubling. The

excavator loaders); *United States v. Black & Decker Mfg. Co.*, 430 F. Supp. 728, 739 (D. Md. 1976) ("weekend warriors" are distinct customers for gasoline powered chain saws for occasional use); *Kennecott Copper*, 231 F. Supp. at 99 (electric utilities are distinct customers for paper insulated power cable).

365. *Blue Bell, Inc.*, 395 F. Supp. at 542-43.

366. See, e.g., *Photovest Corp. v. Fotomat Corp.*, 606 F.2d 704, 713 (7th Cir. 1977), *cert. denied*, 445 U.S. 917 (1980) (distinguishing drive-through photo processing from other photo processing on the basis of its higher price); *Abex Corp.*, 420 F.2d at 930, 932 (distinguishing sintered metal breaks from others on the basis of their much higher cost); *United States v. American Technical Indus., Inc.*, 1974-1 Trade Cas. (CCH) ¶ 74,873, at 95,873 (M.D. Pa. 1974) (distinguishing artificial Christmas trees from natural ones on the basis of their far higher price); *United States v. Pennzoil Co.*, 252 F. Supp. 962, 972-73 (W.D. Pa. 1965) (distinguishing Pennsylvania grade crude oil from other crude oil partially on the basis of its higher price); *United States v. Lever Bros. Co.*, 216 F. Supp. 887, 890-91 (S.D.N.Y. 1963) (distinguishing low-sudsing detergents from high-sudsing detergents partly on the basis of the former's higher price).

367. See, e.g., *RSR Corp. v. FTC*, 602 F.2d 1317, 1322 (9th Cir. 1979) (distinguishing secondary lead from primary lead partially on the basis of its 10% lower price), *cert. denied*, 445 U.S. 927 (1980); *Avnet, Inc. v. FTC*, 511 F.2d 70, 72, 77 (7th Cir. 1975) (distinguishing used automotive electrical units from new ones on the basis of their lower price), *cert. denied*, 423 U.S. 833

fact that consumers select one product over another demonstrates a preference for the selected product at prevailing prices. That the preferred product has a higher or lower price than substitutes does not, in general, indicate anything about the intensity of the preference. Consumers may view the two products to be good substitutes precisely because of a particular price difference. Consider for example, milk selling for 50¢ a quart and \$1 a half gallon. This specific difference in price is likely to cause many consumers to substitute freely between quarts and half gallons. Moreover, the prices that prevail in the market may be the result of substitution possibilities by consumers. If the price of half gallons is more than twice that of quarts, consumers can be expected to buy quarts instead.

However, the fact that the putative relevant product sells for a lower price than substitutes can be decisive under limited circumstances. Suppose that consumers of the putative relevant product would freely switch to a substitute if, and only if, its price were lower than that of the putative relevant product. Further suppose that the substitute actually sells at a price twice that of the putative relevant product and is purchased only by consumers unable for some reason to use the putative relevant product. In this case, the price difference is precisely what makes the putative relevant product an actual relevant market. A monopolist over this product would be able to raise the price up to a hundred percent without any loss of sales to the substitute. This is the sort of scenario invoked by the Supreme Court in *United States v. Aluminum Co. of America*,³⁶⁸ but it does not appear to have been the relevant scenario in any of the lower court cases.

A higher price for the putative relevant product can also be decisive if what it signifies is that supposed substitutes would not be acceptable at any price. Two products that perform basically the same function may be so different that the users of one would never use the other. For example, brakes designed to stop cars and brakes designed to stop heavy equipment or large airplanes are very similar in function, but they are not freely substitutable. This is the scenario some of the courts surely had in mind, and in rare cases, it was even the relevant scenario.³⁶⁹

(1975); *General Foods Corp. v. FTC*, 386 F.2d 936, 943 (3d Cir. 1967) (distinguishing household steel wool from substitutes partially on the basis of its lower price, but refusing to compare on the basis of price per use), *cert. denied*, 391 U.S. 919 (1968); *FTC v. Lancaster Colony Corp.*, 434 F. Supp. 1088, 1093 (S.D.N.Y. 1977) (distinguishing glassware for everyday use from fine glassware on the basis of its lower price); *Black & Decker*, 430 F. Supp. at 738 (distinguishing chain saws designed for occasional use from professional models partially on the basis of their lower price).

368. 377 U.S. 271, *reh'g denied*, 377 U.S. 1010 (1964). This case is commonly known as the "Rome Cable" decision; see also *supra* notes 270-77 and accompanying text.

369. *E.g., Abex Corp.*, 420 F.2d at 930, 932.

The existence of more than one price for a single product may be important because it may signify price discrimination. This was likely the case for the florists foil in the *Reynolds Metals* case,³⁷⁰ but there is no indication that it was in any of the other cases decided between 1962 and 1982.

It is also interesting to note that the presence of distinct prices generally did not move the courts to delineate separate markets on the basis of price and quality differences. The Supreme Court refused to do this in *Brown Shoe*, and many lower courts followed suit, providing little explanation.³⁷¹ This is rather curious in light of the courts' tendency to delineate narrow submarkets based on the practical indicia.

The last, and decidedly least, of the practical indicia, specialized vendors, also was cited by the courts with some frequency,³⁷² but the point of the exercise was never apparent. The idea may have been that products sold next to each other in the same stores are more likely to be good substitutes than products sold in different stores.

The foregoing has skipped over two of the practical indicia—peculiar characteristics and uses and sensitivity to price changes. These are basically the tests of *du Pont-General Motors*³⁷³ and *Cellophane*,³⁷⁴ and as such they were considered above.³⁷⁵ It should be noted, however, that when lower courts did not just mechanically apply the practical indicia, they tended to rely on one of these factors. The rubric of peculiar characteristics and uses was invoked to highlight special aspects of a product that separated it in the

370. See *supra* notes 163–66 and accompanying text.

371. See, e.g., *Nifty Foods Corp. v. Great Atl. & Pac. Tea Co.*, 614 F.2d 832, 840–41 (2d Cir. 1980) (refusing to consider brand-name and private-label waffles to be in separate markets); *Liggett & Myers, Inc. v. FTC*, 567 F.2d 1273, 1275–76 (7th Cir. 1977) (refusing to consider premium and economy dog food to be in separate markets); *Beatrice Foods Co. v. FTC*, 540 F.2d 303, 309–10 (7th Cir. 1976) (refusing to consider brushes and rollers for professional use and those for do-it-yourself use to be in separate markets); *United States v. Jos. Schlitz Brewing Co.*, 253 F. Supp. 129, 145–46 (N.D. Cal.), *aff'd per curiam*, 385 U.S. 37 (1966) (refusing to consider premium and nonpremium beer to be in separate markets).

372. See, e.g., *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 229 (E.D. Pa. 1976) (frozen dessert pies are distributed through frozen food brokers and fresh dessert pies are not); *United States v. Black & Decker Mfg. Co.*, 430 F. Supp. 728, 740 (D. Md. 1976) (occasional user chain saws are distributed through hardware stores and mass merchandisers, and professional chain saws are not); *United States v. Blue Bell, Inc.*, 395 F. Supp. 538, 546 (M.D. Tenn. 1975) (industrial rental garments are distributed through specialized warehouses); *United States v. Healthco, Inc.*, 387 F. Supp. 258, 260–61 (S.D.N.Y.) (dental equipment and sundries are distributed through specialized dealers), *aff'd without opinion*, 535 F.2d 1243 (2d Cir. 1975); *United States v. American Technical Indus., Inc.*, 1974-1 Trade Cas. (CCH) ¶ 74,873, at 95,873 (M.D. Pa. 1974) (artificial Christmas trees sold through department stores, discount stores, etc., and natural Christmas trees sold through nurseries, garden stores, etc.).

373. 353 U.S. 586 (1957); see *supra* text accompanying note 97.

374. 351 U.S. 377 (1956); see *supra* text accompanying note 78.

375. See *supra* notes 62–117 and accompanying text.

minds of consumers from would be substitutes.³⁷⁶ The rubric of sensitivity to price changes was invoked to make the essential point that consumers would not readily substitute away from the putative relevant product.³⁷⁷ Sensitivity to price changes appears also to have been invoked by courts focusing on a lack of correlation between the price of the putative relevant product and that of a would-be substitute.³⁷⁸

B. Supreme Court Merger Cases of the Early 1970s

Only one of the Supreme Court cases discussed above was decided after 1968.³⁷⁹ Three additional relevant cases were decided in 1974, at which time the composition of the Court had changed considerably. Chief Justice Warren had been replaced by Chief Justice Burger, and Justices Black, Clark, Fortas, and Harlan had been replaced by Justices Blackmun, Marshall, Powell, and Rehnquist. The net effect was a significant shift to the right both in the Court's general jurisprudential approach and on antitrust matters. The government no longer always won. Indeed, in 1974, the government lost three out of three, all with five-Justice majorities consisting of Chief Justice Burger and Justices Blackmun, Powell, Rehnquist, and Stewart.

376. See, e.g., *Mississippi River Corp. v. FTC*, 454 F.2d 1083, 1090 (8th Cir. 1972) ("There is no practical substitute for portland cement."); *Abex Corp. v. FTC*, 420 F.2d 928, 930-31 (6th Cir.) (sintered metal breaks are uniquely capable of dealing with heavy loads and high temperatures), *cert. denied*, 400 U.S. 865 (1970); *FTC v. Weyerhaeuser Co.*, 1981-1 Trade Cas. (CCH) ¶ 63,974, at 76,043 (D.D.C.), *aff'd*, 1981-2 Trade Cas. (CCH) ¶ 64,263 (D.C. Cir. 1981) ("There are no realistic substitutes for corrugating medium."); *United States v. Acorn Eng'g Co.*, 1981-2 Trade Cas. (CCH) ¶ 64,197, at 73,712 (N.D. Cal. 1981) (only vandal resistant plumbing fixtures are adequate for certain uses); *United States v. M.P.M., Inc.*, 397 F. Supp. 78, 87 (D. Colo. 1975) (ready-mix concrete is exclusively used for various purposes); *American Technical*, 1974-1 Trade Cas. (CCH) at 95,875 (artificial Christmas trees are fire resistant and have a useful life of four years or more); *United States v. Lever Bros. Co.*, 216 F. Supp. 887, 890-91 (S.D.N.Y. 1963) (low sudsing detergents perform better in home use).

377. One clearly relevant example is *SmithKline Corp. v. Eli Lilly & Co.*, 575 F.2d 1056, 1063-64 (3d Cir.) (absence of significant cross-elasticity of demand considered under rubric of sensitivity to price changes), *cert. denied*, 439 U.S. 838 (1978). Other less clear examples are: *Acorn Eng'g Co.*, 1981-2 Trade Cas. (CCH) at 73,712 (prices of merging firms sensitive to each other but not other firms); *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 229 (E.D. Pa. 1976) (prices of frozen dessert pies are not sensitive to the prices of other dessert products).

378. See, e.g., *RSR Corp. v. FTC*, 602 F.2d 1317, 1322 (9th Cir. 1979) (secondary lead prices vary with trucking costs, and presumably primary lead prices do not), *cert. denied*, 445 U.S. 927 (1980); *Avnet, Inc. v. FTC*, 511 F.2d 70, 77 (7th Cir.) (noting the "absence of any substantial price interaction in price between" reconditioned and new parts), *cert. denied*, 423 U.S. 833 (1975); *American Technical*, 1974-1 Trade Cas. (CCH) at 95,873 ("no close alignment between price fluctuations" of artificial Christmas trees and price fluctuations of natural Christmas trees).

379. *United States v. Phillipsburg Nat'l Bank & Trust Co.*, 399 U.S. 350 (1970).

*United States v. Marine Bancorporation, Inc.*³⁸⁰ and *United States v. Connecticut National Bank*³⁸¹ were similar cases decided on the same day. In both cases, the merging firms did not operate at the same locations. Therefore, an expansive geographic market was necessary to bring the merging firms into direct competition. The government argued that a relevant market in which to evaluate the merger was the state in which the merging firms in each case were located.³⁸² In both cases, the Supreme Court rejected this argument. Instead, the Court held that banking was local and so too were the relevant markets for it.³⁸³

The two cases also eliminated any uncertainty that the Court's decision in *United States v. Pabst Brewing Co.*³⁸⁴ may have created as to the role of market delineation. In *Marine Bancorporation*, the Court exploded the notion that geographic market delineation was no longer necessary by holding that: "Determination of the relevant product and geographic markets is 'a necessary predicate' to deciding whether a merger contravenes the Clayton Act."³⁸⁵ In *Connecticut National Bank*, the Court clarified its earlier statement that the government is not required to delineate the geographic market by metes and bounds: "To the extent that this means that such markets need not—indeed cannot—be defined with scientific precision, it is accurate. But it is nevertheless the Government's role to come forward with evidence delineating the rough approximation of the market boundaries."³⁸⁶

In *Marine Bancorporation*, the Court also rejected the government's contention that Section 7's reference to a "section of the country" could mean anything other than a "relevant geographic market."³⁸⁷ And in *Connecticut National Bank*, the Court also reinforced its earlier pronouncements that the relevant product market was the cluster of commercial

380. 418 U.S. 602 (1974).

381. 418 U.S. 656 (1974).

382. In *Connecticut National Bank*, the district court had held that the state of Connecticut was a relevant market. *United States v. Connecticut Nat'l Bank*, 362 F. Supp. 240, 281-83 (D. Conn. 1973), cert. granted, 414 U.S. 1127, and vacated, 418 U.S. 656 (1974); see also *Connecticut Nat'l Bank*, 418 U.S. at 666. In *Marine Bancorporation*, the district court had found that the relevant market was local. The Government disagreed and argued before the Supreme Court that the state was also a relevant "section of the country" even though it was not a market. *United States v. Marine Bancorporation*, 1973-1 Trade Cas. (CCH) ¶ 74,496, at 94,244 (W.D. Wash. 1973), aff'd, 418 U.S. 602 (1974); see also *Marine Bancorporation*, 418 U.S. at 619-20.

383. *Connecticut Nat'l Bank*, 418 U.S. at 667-69; *Marine Bancorporation*, 418 U.S. at 618-19.

384. 384 U.S. 546 (1966); see also *supra* notes 324-31 and accompanying text.

385. *Marine Bancorporation*, 418 U.S. at 618.

386. *Connecticut Nat'l Bank*, 418 U.S. at 669.

387. *Marine Bancorporation*, 418 U.S. at 620-22.

banking services. It held to be erroneous the district court's determination that savings banks were in the relevant market.³⁸⁸

The third Supreme Court merger decision in 1974 was in *United States v. General Dynamics Corp.*,³⁸⁹ in which the district court had held the relevant market for analyzing the merger of two coal producers included gas, oil, uranium, and other fuels as well as coal.³⁹⁰ The Supreme Court affirmed the district court's finding that the merger did not violate Section 7 on other grounds³⁹¹ without considering market delineation.³⁹² In a dissenting opinion, Justice Douglas did consider market delineation, arguing that the relevant market should be limited to coal because of its significant price advantage as an electric utility fuel.³⁹³

C. Other Lower Court Cases on Market Delineation, 1962-82

A fitting summary of the lower court decisions on market delineation between 1962 and 1982 was provided by one district court: "Reported cases have largely been limited to governmental concerns for protection of competition where courts have narrowed and broadened the product market without real criteria or consistency."³⁹⁴ The courts' treatment of several specific matters, nevertheless, is worth mentioning.³⁹⁵

One notable event occurred in *Mrs. Smith's Pie Co.*, in which the government attempted to demonstrate that frozen dessert pies were a relevant market by introducing elasticity of demand estimates. The court rejected this evidence because it had "no basis for evaluating what a particular elasticity coefficient means."³⁹⁶ So much for the cross-elasticity-of-demand test from *Cellophane*.

388. *Connecticut Nat'l Bank*, 418 U.S. at 660-66.

389. 415 U.S. 486 (1974).

390. *United States v. General Dynamics Corp.*, 341 F. Supp. 534, 545-50, 555-56 (N.D. Ill. 1972), *aff'd*, 415 U.S. 486 (1974).

391. The Court held that the proper measure of market share was uncommitted coal reserves rather than coal production, and one of the merging firms had very little uncommitted coal reserves. *General Dynamics*, 415 U.S. at 506-10.

392. *Id.* at 510-11.

393. *Id.* at 513-17 (Douglas, J., dissenting).

394. *Calnetics Corp. v. Volkswagen of Am., Inc.*, 348 F. Supp. 606, 617 (C.D. Cal. 1972), *remanded*, 532 F.2d 674, 691 (9th Cir.), *cert. denied*, 429 U.S. 940 (1976).

395. Useful discussions of the cases are provided by KINTNER, *supra* note 344, chs. 37-38; Joseph E. Fortenberry, *Definition of Markets in Merger Cases: Developments Since the 1968 Department of Justice Merger Guidelines*, 25 How. L.J. 595 (1982); Gertrude S. Rosenthal, *Continental Can Revisited: Limits upon the Breadth of a Line of Commerce in a Section 7 Case*, 14 Hous. L. REV. 973 (1977).

396. *United States v. Mrs. Smith's Pie Co.*, 440 F. Supp. 220, 227-28 (E.D. Pa. 1976).

The widespread use of cluster markets in industries other than banking also merits note.³⁹⁷ The rationale for clustering was not necessarily apparent. One case rejected a cluster proposed by the government as underinclusive because it failed to include all of the nonsubstitutable tools a user likely would need.³⁹⁸ In another case, the court rejected a defendant's argument that the market should be limited to shampoos and conditioners rather than include the entire cluster of beauty products on the grounds that manufacturers and distributors "tend to deal in the entire range of beauty products."³⁹⁹

With respect to the delineation of the product dimensions of markets, the most notable aspect of the lower court cases was their inconsistent treatment of supply substitutability. Several circuits, most notably the Ninth Circuit, held that supply substitutability had to be considered in market delineation.⁴⁰⁰ The Seventh Circuit, however, refused to do so.⁴⁰¹ One doubtful case from each group is instructive.

In *Calnetics Corp. v. Volkswagen of America, Inc.*,⁴⁰² a private vertical merger case, plaintiff argued for a market limited to Volkswagen air conditioners and defendant argued for a market consisting of all automotive air conditioners on the grounds that plaintiffs' facilities could be shifted from the production of Volkswagen air conditioners to the production of other automotive air conditioners.⁴⁰³ The district court sided with plaintiff but

397. See, e.g., *JBL Enters., Inc. v. Jhirmack Enters., Inc.*, 509 F. Supp. 357, 366-69 (N.D. Cal. 1981), *aff'd*, 698 F.2d 1011 (9th Cir.) (relevant market is beauty products sold to professional outlets), *cert. denied*, 464 U.S. 829 (1983); *FTC v. Lancaster Colony Corp.*, 434 F. Supp. 1088, 1093-94 (S.D.N.Y. 1977) (relevant market is "cluster of machine-pressed and machine-blown moderately-priced soda-lime glassware"); *United States v. Hughes Tool Co.*, 415 F. Supp. 637, 639-41 (C.D. Cal. 1976) (relevant market is "cluster of specialized surface rotary drilling tools"); *United States v. Healthco, Inc.*, 387 F. Supp. 258, 260-61 (S.D.N.Y.) (relevant markets are dental equipment and dental sundries), *aff'd without opinion*, 535 F.2d 1243 (2d Cir. 1975); *Science Prods. Co. v. Chevron Chem. Co.*, 384 F. Supp. 793 (N.D. Ill. 1974) (relevant market is products that "affect plant or insect life in and around the home").

398. *Hughes Tool Co.*, 415 F. Supp. at 640.

399. *JBL Enters., Inc.*, 509 F. Supp. at 368-69.

400. See *Equifax, Inc. v. FTC*, 618 F.2d 63, 66 (9th Cir. 1980); *Spectrofuze Corp. v. Beckman Instruments, Inc.*, 575 F.2d 256, 280-81 & n.79 (5th Cir. 1978), *cert. denied*, 440 U.S. 939 (1979); *United States v. Empire Gas Corp.*, 537 F.2d 296, 303 (8th Cir. 1976), *cert. denied*, 429 U.S. 1122 (1977); *Calnetics Corp. v. Volkswagen of Am., Inc.*, 532 F.2d 674, 691 (9th Cir.), *cert. denied*, 429 U.S. 940 (1976); *Twin City Sportservice, Inc. v. Charles O. Finley & Co.*, 512 F.2d 1264, 1271-73 (9th Cir. 1975), *appeal after remand*, 676 F.2d 1291 (9th Cir.), *cert. denied*, 459 U.S. 1009 (1982).

401. See *Kaiser Aluminum & Chem. Corp. v. FTC*, 652 F.2d 1324, 1330-32 (7th Cir. 1981); *L.G. Balfour Co. v. FTC*, 442 F.2d 1, 11 (7th Cir. 1971).

402. 348 F. Supp. 606 (C.D. Cal. 1972), *remanded*, 532 F.2d 674 (9th Cir.), *cert. denied*, 429 U.S. 940 (1976).

403. *Id.* at 617-18.

the Ninth Circuit reversed the district court's decision.⁴⁰⁴ The court of appeals' conclusion may have been correct,⁴⁰⁵ but its reasoning was not. Whether current producers of Volkswagen air conditioners could exercise market power might depend a great deal on whether current producers of air conditioners for other cars could substitute in supply to Volkswagen air conditioners, but it could not depend at all on whether the current producers of Volkswagen air conditioners could substitute in supply to air conditioners for other cars.

In *L.G. Balfour Co. v. FTC*,⁴⁰⁶ a nonmerger case, petitioners argued that the relevant market should not be limited to national college fraternity insignia-bearing goods because makers of other emblematic jewelry could produce fraternity products. The Seventh Circuit rejected this plausible argument, holding that substitution in supply was not a relevant factor in market delineation.⁴⁰⁷ This holding is particularly curious in light of the court's recognition of the fact that products bearing the insignia of one fraternity were not good demand substitutes for products bearing the insignia of another fraternity.⁴⁰⁸ The obvious rationale for combining these products into a single market would be supply substitutability, but the court chose to combine them without any cogent rationale.⁴⁰⁹

Between 1962 and 1982, there was little new in the lower court decisions on the delineation of the geographic dimensions of relevant markets. The lower courts frequently delineated markets within markets in the earlier part of this period,⁴¹⁰ but there was a tendency not to do so in the latter part.⁴¹¹ On the product side, markets-within-markets were uncommon throughout the period. One explanation for the decline in the court's delineation of markets-within-markets is that a court only needed to find a

404. *Calnetics Corp.*, 532 F.2d at 618, 691.

405. The appeals court's decision is supported by 2 AREEDA & TURNER, *supra* note 90, at 429-30.

406. 442 F.2d 1 (7th Cir. 1971).

407. *Id.* at 9, 11.

408. *Id.* at 11.

409. *Id.* at 10-11.

410. See, e.g., *United States Steel Corp. v. FTC*, 426 F.2d 592, 596 (6th Cir. 1970) (delineating as relevant geographic markets for portland cement the Northeastern United States and the New York metropolitan area); *United States v. G. Heileman Brewing Co.*, 345 F. Supp. 117, 121 (E.D. Mich. 1972) (delineating as relevant geographic markets for beer an eight-state area and any state or combination of states among the eight); *United States v. Kimberly-Clark Corp.*, 264 F. Supp. 439, 455 (N.D. Cal. 1967) (delineating as relevant geographic markets for paper products a six-state area and the entire United States); *United States v. Jos. Schlitz Brewing Co.*, 253 F. Supp. 129, 146-47 (N.D. Cal.) (delineating as relevant geographic markets for beer an eight-state area and California alone), *aff'd per curiam*, 385 U.S. 37 (1966), *reh'g denied*, 385 U.S. 1021 (1967).

411. See Fortenberry, *supra* note 395, at 609-11.

merger unlawful in a single market, so the courts tended just to pick a single market with which they felt comfortable about both the market and the finding of illegality. This explanation, however, may not be entirely satisfactory.

There was little indication that the courts were attempting to articulate criteria for the delineation of the geographic boundaries of markets. Many cases sensibly cited transportation costs as a basis for delineating geographic market boundaries.⁴¹² On the other hand, a number of cases fell back on the practical indicia, citing industry recognition of a geographic market,⁴¹³ or relied on otherwise dubious reasoning.⁴¹⁴

In 1980, Donald Turner summed up the state of the case law on market delineation by stating that "this whole area is a bloody mess."⁴¹⁵ What more can one say.

D. Scholarly Literature, 1962-82

Some of the commentary on the Supreme Court cases between 1962 and 1982 was noted above.⁴¹⁶ Much of the remaining legal and economic literature on antitrust market delineation between 1962 and 1982 repeated familiar themes without contributing new ideas.⁴¹⁷ Several works elaborating on

412. See, e.g., *Luria Bros. & Co. v. FTC*, 389 F.2d 847, 864 (3d Cir. 1966), cert. denied, 393 U.S. 829 (1968) (citing prohibitive costs of transporting scrap metal long distances); *FTC v. Weyerhaeuser Co.*, 1981-1 Trade Cas. (CCH) ¶ 63,974, at 76,044 (D.D.C.) (citing the cost of transporting corrugating medium); *Kimberly-Clark Corp.*, 264 F. Supp. at 455 (citing high freight rates for paper products); *M.P.M., Inc.*, 397 F. Supp. at 87 (citing high transportation cost of ready-mix concrete); *G. Heileman Brewing Co.*, 345 F. Supp. at 121 (citing the cost of transporting beer).

413. See, e.g., *F. & M. Schaefer Corp. v. C. Schmidt & Sons, Inc.*, 597 F.2d 814, 817 (2d Cir. 1979) (two metropolitan areas treated separate by the beer industry and defendants); *Weyerhaeuser*, 1981-1 Trade Cas. (CCH) at 76,044 (defendant's documents treat the West Coast separately, and industry compiles statistics for the West Coast), *aff'd*, 1981-2 Trade Cas. (CCH) ¶ 64,263 (D.C. Cir. 1981); *United States v. Federal Co.*, 403 F. Supp. 161, 164 (W.D. Tenn. 1975) (flour industry statistical studies treat Southeast separately); *Kimberly-Clark Corp.*, 264 F. Supp. at 455 (citing industry recognition without explanation).

414. See, e.g., *RSR Corp. v. FTC*, 602 F.2d 1317, 1321 (9th Cir. 1979) (finding a national market for secondary lead for no apparent reason despite finding that transportation costs drastically limit range of competition), cert. denied, 445 U.S. 927 (1980); *ICM Realty v. Cabot, Cabot & Forbes Land Trust*, 378 F. Supp. 918, 922 (S.D.N.Y. 1974) (finding a national market for certain real estate financing because both parties do business throughout the United States).

415. Donald F. Turner, *The Role of the "Market Concept" in Antitrust Law*, 49 ANTITRUST L.J. 1145, 1150 (1980).

416. See *supra* notes 263-69, 292-93, 331 and accompanying text.

417. This certainly was the case for what were three of the most widely read works written and published by economists during this period. See DOUGLAS NEEDHAM, *THE ECONOMICS OF INDUSTRIAL STRUCTURE, CONDUCT AND PERFORMANCE* ch. 5 (1978); F.M. SCHERER, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* 60-62 (2d ed. 1980); Peter O. Steiner, *Markets and Industries*, in *INTERNATIONAL ENCYCLOPEDIA OF THE SOCIAL SCIENCES*

earlier ideas are worth a brief mention. A law review comment⁴¹⁸ argued that the interchangeability of market delineation between Section 7 and Section 2 applied to the geographic dimensions of markets as well as to their product dimensions addressed in *Grinnell*.⁴¹⁹ Two law review notes argued that supply substitutability should play an important role in delineating the product dimensions of markets,⁴²⁰ and much the same was said by other literature during the period.⁴²¹ One economist also argued at length against the use of cross-elasticities of demand to measure closeness of substitutes.⁴²²

A chronological review of the more notable contributions begins in 1973 with the work of Kenneth Elzinga and Thomas Hogarty. They were the first economists to argue that the definition of a market offered by classical economists can and should be used in the antitrust context.⁴²³ They also were the first to propose and apply a specific method for using data to delineate markets.⁴²⁴ Their test used shipments data to delineate the geographic

575 (David L. Sills ed., 1968). Most legal works of the era simply summarized the confused case law; see, e.g., ABA ANTITRUST SECTION, MONOGRAPH NO. 7, MERGER STANDARDS UNDER U.S. ANTITRUST LAWS 25-46 (1981); ABA ANTITRUST SECTION, ANTITRUST LAW DEVELOPMENTS 48-52, 65-70 (1975).

418. Glenn W. Brown, Jr., Comment, *Relevant Geographic Market Delineation: The Interchangeability of Standards in Cases Arising Under Section 2 of the Sherman Act and Section 7 of the Clayton Act*, 1979 DUKE L.J. 1152 (1979).

419. *United States v. Grinnell Corp.*, 384 U.S. 563, 573 (1966); see also *supra* text accompanying note 303.

420. Robert L. Hubbard, Note, *Potential Production: A Supply Side Approach for Relevant Product Market Definitions*, 48 FORDHAM L. REV. 1199 (1980); Bruce A. Karsh, Note, *The Role of Supply Substitutability in Defining the Relevant Product Market*, 65 VA. L. REV. 129 (1979).

421. See, e.g., 2 AREEDA & TURNER, *supra* note 90, at 374-76, 426-31; NEEDHAM, *supra* note 417, 112-13; POSNER, *supra* note 331, at 126, 132; SCHERER, *supra* note 417, at 60-62; Corwin D. Edwards, *Economic Concepts and Antitrust Litigation: Evolving Complexities*, 19 ANTITRUST BULL. 295, 303-05 (1974). Alone in dissenting from the view that supply substitutability should be considered in market delineation was Michael L. Glassman, *Market Definition as a Practical Matter*, 49 ANTITRUST L.J. 1155, 1158 (1980).

422. See Klaus Stegemann, *Cross Elasticity and the Relevant Market*, 94 ZEITSCHRIFT FÜR WIRTSCHAFTS- & SOZIALWISSENSCHAFTEN 151 (1974). The main point of the critique was that cross-elasticities of demand are overly sensitive to the initial quantities of two products. The fact that a 10% increase in the price of Product A would cause half of the consumers to switch to Product B is consistent with both a large and a small cross-elasticity of demand because the quantity of Product B consumed may be much larger or much smaller than that of Product A.

423. Elzinga & Hogarty, *supra* note 15, at 47-50.

424. The idea of using price correlations to delineate antitrust markets certainly goes back further. See *infra* note 555 and accompanying text. However, there was no earlier published work in the economic literature that proposed a specific test and applied it to real data.

boundaries of markets,⁴²⁵ and they applied it to the facts of *Pabst Brewing*⁴²⁶ and another beer merger.⁴²⁷

In his 1976 book, Richard Posner made three points of particular interest on market delineation. First, Posner stated that "[i]t is only because we lack confidence in our ability to measure elasticities, or perhaps because we do not think of adopting so explicitly economic an approach, that we have to define markets instead."⁴²⁸ The important aspect of this statement is that it makes the fundamental connection between market delineation and market power that had been made in the *Cellophane* case, but rarely since then.⁴²⁹ Second, Posner explained:

The *Cellophane* fallacy does not arise in a merger case, where the issue is not whether the current price exceeds the competitive level but whether the merger might result in a further deterioration of competitive conditions. If there are good substitutes in consumption or production at the current price, it is a detail whether that price is competitive or monopolistic; the important point is that a merger is unlikely to lead to a further price increase. Thus the criteria of relevant market should be different in monopolization and merger cases, although the Supreme Court has said that they are the same.⁴³⁰

Finally, he argued:

The "submarket" approach is unsound. If the "outer boundaries" of the market include only the product's good substitutes in both consumption and production—which seems a fair reading of *Brown Shoe*'s reformulation of the cellophane test—then a submarket would be a group of sellers from which sellers of good substitutes in consumption or production had been excluded, and these exclusions would deprive any market-share statistics of their economic significance.⁴³¹

425. Elzinga & Hogarty, *supra* note 15, at 72–76; Kenneth G. Elzinga & Thomas F. Hogarty, *The Problem of Geographic Market Delineation Revisited: The Case of Coal*, 23 ANTITRUST BULL. 1, 2–3 (1978); see *infra* notes 544–52 and accompanying text for a discussion of their test.

426. *United States v. Pabst Brewing Co.*, 384 U.S. 546 (1966).

427. Elzinga & Hogarty, *supra* note 15, at 76–80.

428. POSNER, *supra* note 331, at 125. Essentially the same point was made by 2 AREEDA & TURNER, *supra* note 90, at 330. In a later article with a coauthor, Posner repeated this point and added the argument that markets can be delineated almost arbitrarily if the relevant elasticities are known and properly considered. Landes & Posner, *supra* note 1, at 962.

429. Posner most likely had the Section 2 context in mind in making this statement, and he certainly is correct in that context. On the other hand, market delineation plays an important role in most merger cases, and there are no good substitutes for market delineation in that role. See *supra* note 19.

430. POSNER, *supra* note 331, at 128–29 (footnote omitted).

431. *Id.* at 129.

In 1977, Lawrence Sullivan published his popular treatise. He prefaced the discussion of the cases on market delineation with an insightful overview:

Market definition is not a jurisdictional prerequisite, or an issue having its own significance under the statute; it is merely an aid for determining whether power exists. To define a market in product and geographic terms is to say that if prices were appreciably raised or volume appreciably curtailed for the product within a given area, while demand held constant, supply from other sources could not be expected to enter promptly enough and in large enough amounts to restore the old price or volume. If sufficient supply would promptly enter from other geographic areas, then the "defined market" is not wide enough in geographic terms; if sufficient supply would promptly enter in the form of products made by other producers which had not been included in the product market as defined, then the market would not be wide enough in defined product terms. A "relevant market," then, is the narrowest market which is wide enough so that products from adjacent areas or from other producers in the same area cannot compete on substantial parity with those included in the market.⁴³²

Like Posner, Sullivan made the critical connection between market delineation and market power. He also suggested in vague terms a means for bounding a unique relevant market, although he then went on to argue that several concentric markets may be appropriate.⁴³³

The first three volumes of the extraordinary Areeda and Turner treatise appeared in 1978, and they contained one of the most extensive discussions of market delineation ever published. They began by stating: "In economic terms, a 'market' embraces one firm or any group of firms which, if unified by agreement or merger, would have market power in dealing with any group of buyers."⁴³⁴ They then explained that this concept immediately leads "to the critical but vexing question of degree: What quantum of market power is an appropriate subject of concern? Deciding the boundaries of the market, and often the legal outcome of a case, will hinge on the answer."⁴³⁵ In an illustrative example, they phrase the threshold for concern about market power in terms of the price increase that a monopolist would

432. SULLIVAN, *supra* note 90, at 41 (footnote omitted).

433. *Id.* at 42-43.

434. 2 AREEDA & TURNER, *supra* note 90, at 347.

435. *Id.* This important observation also was made by SCHERER, *supra* note 417, at 549 n.111.

impose, and they opine that a one percent price increase is too slight, five percent probably is enough and ten percent clearly is more than enough.⁴³⁶

Areeda and Turner also argued that the critical data for market delineation is that relating to price relationships and shipment patterns, discussing in some detail the interpretation of various specific price relationships and shipment patterns.⁴³⁷ They also discussed several other relevant considerations in market delineation.⁴³⁸ Areeda and Turner summarized, and commented on, many of the leading cases as well.⁴³⁹ In discussing *Brown Shoe*, they criticized a literal interpretation of the submarket concept for basically the same reasons as Posner, but they then concluded that the Court could not have intended such an interpretation. They argued that the *Brown Shoe* dictum "meant merely to recognize that fine distinctions may sometimes be necessary and other times not."⁴⁴⁰

In 1979, Kenneth Boyer suggested that the unique relevant market for any particular firm was the "ideal collusive group" centered on that firm.⁴⁴¹ The idea of this definition is that adding additional firms to a cartel tends to increase the market power of the cartel; but some firms are more important than others, and beyond some point, adding additional firms does not increase the average profitability of cartel members. In a later work, Boyer proposed a specific criterion for determining which firms should be included in a firm's relevant market.⁴⁴²

In 1981, this author proposed the following definition: "A market *for antitrust purposes* is any product or group of products and any geographic area in which collective action by all firms (as through collusion or merger) would result in a profit maximizing price that significantly exceeded the

436. 2 AREEDA & TURNER, *supra* note 90, at 347.

437. *Id.* at 351-58.

438. *See id.* at 358-76 (discussing transportation costs, customer convenience, substitution in use, and substitution in production).

439. *See id.* at 406-31.

440. *Id.* at 421. Writing alone two years later, Turner interpreted *Brown Shoe* more literally and termed the notion that there could be meaningful submarkets within a meaningful market "an absolute contradiction in terms." Turner, *supra* note 415, at 1151.

441. Kenneth D. Boyer, *Industry Boundaries*, in *ECONOMIC ANALYSIS AND ANTITRUST LAW* 70, 73-74 (Terry Calvani & John Siegfried eds., 2d ed. 1988). In the same article, Boyer also criticized the use of cross-elasticities of demand for market delineation. *Id.* at 74-76.

442. *See* Kenneth D. Boyer, *Is There a Principle for Defining Industries?*, 50 S. ECON. J. 761 (1984). While Boyer's basic idea has considerable merit, his specific formalization suffers from several serious problems: Markets may be lopsided or have holes or be far too small, and they may include firms that would not be in any realistic cartel because of high coordination costs. *See* Gregory J. Werden, *Is There a Principle for Defining Industries? Comment*, 52 S. ECON. J. 532 (1985).

competitive price."⁴⁴³ As to what is significant, a ten percent to twenty percent increase was suggested.⁴⁴⁴ The phrase "for antitrust purposes" was italicized to emphasize the fact that the meaning of the term "market" was not that ascribed by classical economists.⁴⁴⁵ I went on to explain that this definition will yield markets within markets and argued that "the relevant market in any particular case is the smallest group of products and geographic area that constitutes a market."⁴⁴⁶

The view that market delineation must be based on the underlying concern with market power was spreading rapidly in the early 1980s but certainly was not universal. Two papers published by economists in 1981 dissented.⁴⁴⁷

Finally, in his 1981 presidential address to the American Economic Association, George Stigler contended that economists had contributed little to antitrust market delineation:

My lament is that this battle on market definitions, which is fought thousands of times what with all the private antitrust suits, has received virtually no attention from us economists. Except for a casual flirtation with cross elasticities of demand and supply, the determination of markets has remained an undeveloped area of economic research at either the theoretical or empirical level.⁴⁴⁸

This statement may no longer have been accurate by the time it was made, but the point is well taken.

443. Gregory J. Werden, *The Use and Misuse of Shipments Data in Defining Geographic Markets*, 26 ANTITRUST BULL. 719, 721 (1981). I developed the definition from insights learned from George Hay in 1977, and the article was written in mid-1978. Thus, the similarity to the work of Areeda and Turner probably was coincidence.

444. *Id.* at 721.

445. *Id.* at 721 & n.7. This point was elaborated in Gregory J. Werden, *Market Delineation and the Justice Department's Merger Guidelines*, 1983 DUKE L.J. 514, 514-16. Others have made a similar point. See David T. Scheffman & Pablo T. Spiller, *Geographic Market Definition Under the U.S. Department of Justice Merger Guidelines*, 30 J.L. & ECON. 123, 127-28 (1987); Pablo T. Spiller & Cliff J. Huang, *On the Extent of the Market: Wholesale Gasoline in the Northeastern United States*, 35 J. INDUS. ECON. 131, 132-33 (1986).

446. Werden, *supra* note 443, at 721.

447. See Kenneth G. Elzinga, *Defining Geographic Market Boundaries*, 26 ANTITRUST BULL. 739, 751 (1981); Ira Horowitz, *Market Definition in Antitrust Analysis: A Regression-Based Approach*, 48 S. ECON. J. 1, 1-2 n.2 (1981).

448. George J. Stigler, *The Economists and the Problem of Monopoly*, 72 AM. ECON. REV. 1, 9 (1982); see also Horowitz, *supra* note 447, at 2 ("Curiously enough, economists have had comparatively little to say about how to delineate markets. Instead, their principal contributions have been to call attention to the single-price characteristic of a (competitive) market, once that market has been identified.").

V. MARKET DELINEATION UNDER THE 1982 AND 1984 MERGER GUIDELINES

A. *The Guidelines' Treatment of Supply Substitutability*

On June 14, 1982, the Department of Justice released drastically revised Merger Guidelines, which themselves were slightly revised exactly two years later.⁴⁴⁹ These Merger Guidelines state, as their unifying theme, "that mergers should not be permitted to create or enhance market power."⁴⁵⁰ The Guidelines offer a complete analytical paradigm designed to identify mergers that would create or enhance market power.⁴⁵¹

The Guidelines⁴⁵² identify three factors that could constrain the ability of even a monopolist to exercise market power over a particular group of products in a particular area: demand substitutability, supply substitutability, and entry. Demand substitutability refers, of course, to the ability of consumers to substitute other products or the same product produced in other areas. Supply substitutability and entry both refer to the ability of producers not currently selling a particular product to begin doing so. The Guidelines' distinction between supply substitution and entry is that entry entails significant new investment in production or distribution or requires more than one year to accomplish while supply substitution does not.⁴⁵³

These disciplining factors as well as market structure and conduct can be addressed in various ways through alternative analytical paradigms. Under the Merger Guidelines' approach, each is addressed in a separate step. Demand substitutability is addressed under the rubric of market delineation, and supply substitutability is addressed under the rubric of identification of competitors. Firms that would quickly and easily substitute in supply in response to an attempted exercise of market power are considered to be competitors in the market and are assigned market shares even though they do not currently sell products in the market. Contrary to some prior

449. See *supra* note 7.

450. 1984 Merger Guidelines, *supra* note 1, § 1.0. Because of the similarity between the 1982 and 1984 Guidelines, only the latter generally are cited. While not separately discussed, the 1992 Merger Guidelines (see *supra* note 7) are mentioned in footnotes below to the extent that they are different.

451. For additional discussion of this paradigm, see Werden, *supra* note 445, at 516-23; Gregory J. Werden, *Merger Guidelines Present Basic Analytic Paradigm*, LEGAL TIMES, June 28, 1982, at 20.

452. This Section offers an interpretation of the Guidelines, rather than merely a summary. As such, much of what follows cannot be found in the exact words of the Guidelines. In particular, many of the terms used below do not appear in the Guidelines.

453. See 1984 Merger Guidelines, *supra* note 1, §§ 2.21, 3.3.

case law and much prior commentary, the Guidelines do not include in the market the products currently produced by the firms that can substitute in supply.

Although the Guidelines' treatment of supply substitutability is quite different in concept from that of the case law, the two ultimately could yield the same market shares. Consider, for example, the proposed merger of two producers of metal hubcaps produced using stamping machines. Under the Guidelines, the relevant market would include only substitutes in demand for stamped metal hubcaps, but metal stamping firms not currently producing hubcaps would be included in the market and assigned market shares. Under some prior case law and much prior commentary, the relevant market could be defined to include all products produced with stamping machines, and the market shares might work out just the same. Nevertheless, the Guidelines' treatment has many advantages.⁴⁵⁴

First, the Guidelines' treatment of supply substitutability avoids a potentially fatal error. Under the case law and commentary's treatment of supply substitutability, the relevant market for a particular product could be defined to include the products to which firms currently selling the particular product could substitute in supply,⁴⁵⁵ rather than, or in addition to, the products produced by firms that do not currently sell the particular product but that could begin doing so by substituting in supply. The fact that the current sellers of a particular group of products can also produce other products has no bearing on their ability to exercise market power over the products they do currently produce.

Second, considering supply substitutability as part of market delineation may make it impossible to think sensibly about market power. Consider the problem of analyzing market power in a market for all metal stampings when individual metal stampings differ greatly with respect to the availability of demand substitutes. If molded plastic parts were good demand substitutes for most metal stampings but not for hubcaps, there would be no

454. The Guidelines' treatment also is preferable over the alternative of considering supply substitutability along with entry because it is desirable to incorporate into market shares all that practically can be incorporated so as to make them the best possible indicators of the state of competition. Supply substitutability can be quantified and incorporated into market shares because the productive capacity available to the market through supply substitution already exists. Such is not the case for entry that requires substantial investment in production or distribution. In addition, firms that can easily substitute in supply and begin selling have made the investment necessary for entry, and at least in that sense, have already entered. Moreover, such firms are likely to vie actively for sales, so the competition that stems from supply substitutability is likely to be actual competition, rather than potential competition.

455. *See supra* notes 363, 402-05 and accompanying text.

useful sense in which there could be market power over metal stampings, yet it would clearly be wrong to add all molded plastic parts to the market.

Third, the Guidelines' treatment is likely to produce more sensible market shares. Shares in a market for all metal stampings would have to be based on dollar sales or shipments because dollars provide the only available common denominator that can be used to aggregate outputs of different metal stampings. The Guidelines' treatment leads to a measure of market share that is likely to be superior for the purposes of evaluating the hub cap merger—the capacity to produce hub caps.

Finally, the Guidelines' treatment makes it easier to cope with a variety of complications. For example, suppose there are two types of stamping machines, an expensive machine that can produce all stampings, and a cheaper machine that can produce just some stampings, including hubcaps. The expensive machines might be unimportant to competition in hubcaps if there existed alternative higher valued uses for the machines. The Guidelines' treatment allows the assignment of shares based on any fraction of expensive stamping machine capacity, including zero. If supply substitutability were treated as a part of market delineation, choices would be more limited, and all products produced on the expensive machines might end up being included just because the machines were occasionally used to produce hubcaps.

B. The Delineation of Relevant Markets Under the Guidelines

The Guidelines define an antitrust market as follows:

[A] product or group of products and a geographic area in which it is sold such that a hypothetical, profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products in that area would impose a "small but significant and nontransitory" increase in price above prevailing or likely future levels.⁴⁵⁶

The Guidelines' threshold for significant market power is phrased in terms of the magnitude of the price increase that would be imposed by a hypothetical monopolist.⁴⁵⁷ As a general matter, a price increase is significant if it is

456. 1984 Merger Guidelines, *supra* note 1, § 2.01. The definition in the 1992 Merger Guidelines is slightly different. See *supra* note 7, § 1.0.

457. The test is whether the profit-maximizing price increase for a hypothetical monopolist would be at least five percent. This was always the case and it has been stated quite explicitly by the 1992 Merger Guidelines, *supra* note 7, §§ 1.11, 1.21. Several commentators have erroneously stated it as whether a five-percent price increase would cause a net increase in profit. See, e.g., Barry C. Harris & Joseph J. Simons, *Focusing Market Definition: How Much Substitution Is Necessary?*, 12 RES. L. & ECON. 207, 211–19 (1989); John R. Morris & Gale R. Mosteller, *Defining Markets for Merger Analysis*, 36 ANTITRUST BULL. 599, 605 n.15 (1991). The difference between

at least five percent and for at least one year, but there is some flexibility in the five-percent figure.⁴⁵⁸

The Guidelines' definition of an antitrust market reflects the separation of demand substitutability—the concern of market delineation—from supply substitutability and entry, which are considered in later steps in the analysis. By referring to a monopolist over a group of products and area, the Guidelines' definition of an antitrust market excludes the possibility of supply substitutability. By referring to a present and future monopolist, the Guidelines' definition of an antitrust market excludes the possibility of entry.

Antitrust markets are by no means unique under the Guidelines' definition. Typically, an infinite number of additional antitrust markets can be constructed from any given antitrust market either by adding one or more additional products or areas to it, or by both adding some products or areas and also subtracting others. Thus, the concept of an antitrust market is extremely flexible and invites the sort of gerrymandering designed to increase or decrease market shares that marked *Rome Cable*, *Continental Can*, and a host of lower court decisions since *Brown Shoe*.⁴⁵⁹

The Guidelines try to avoid gerrymandering of markets and provide meaningful guidance by introducing restrictions on the size and shape of markets. The shape restrictions are introduced through the device of applying the definition of an antitrust market only to certain candidate mar-

these two formulations can be considerable. Compare Werden, *supra* note 268, at 120–21 (tables 1, 3) with Harris & Simons, *supra*, at 216, 218 (tables 1, 2). A five-percent price increase may be more profitable than no price increase but less profitable than a much smaller price increase. Therefore, a five-percent price increase would not be imposed.

458. See 1984 Merger Guidelines, *supra* note 1, §§ 2.11, 2.31. The Guidelines do not indicate how this flexibility will be exercised. A recent statement by Assistant Attorney General James Rill provided some clarification. A slightly higher price increase may be used if a merger would not be horizontal using a strict five-percent price increase but would become horizontal if a slightly higher price increase were used. A slightly lower price increase may be used if there would appear to be no competitive concern in the market delineated using a five-percent price increase but a serious competitive concern in the market delineated using a slightly lower price increase. See James F. Rill, *Merger Enforcement at the Department of Justice*, 59 ANTITRUST L.J. 45, 49–50 (1990). The 1984 Guidelines have been interpreted as requiring that the price increase be uniform within the candidate market. See, e.g., Werden, *supra* note 445, at 529. The 1992 Guidelines are very different in this respect. They state that the “hypothetical monopolist will be assumed to pursue maximum profits in deciding whether to raise the prices of any or all of the” products in the candidate market and that price need be increased by at least the threshold amount, e.g. five percent, only for a “group of products . . . including the . . . product of one of the merging firms” around which the market is delineated. 1992 Merger Guidelines, *supra* note 7, § 1.11. This change in policy can result in dramatically smaller relevant markets, particularly in differentiated products industries.

459. See generally *supra* notes 343–72 and accompanying text.

kets.⁴⁶⁰ The Guidelines specify that the initial candidate markets for any merger are each of the products (narrowly defined) of each of the merging firms and each point at which they are produced. Formally, an initial candidate market is a point in product-geographic space that characterizes a product of one of the merging firms. The Guidelines further specify that a second candidate market is formed from the first by adding the "next-best substitute."⁴⁶¹ The criterion for determining the next-best substitute is not spelled out by the Guidelines, but it reflects an implicit measurement of closeness of substitutes.⁴⁶² Subsequent candidate markets are formed similarly, by repeated application of the implicit closeness-of-substitutes measure, yielding a sequence of candidate markets. Formally, the candidate market sequence is a sequence of elements that are regions in product-geographic space, and each element is entirely contained in every element following it in the sequence.

The first element of the candidate market sequence normally could not be an antitrust market because it is already subject to the monopoly control of one of the merging firms. Immediately subsequent elements also may not be antitrust markets for substantially similar reasons. Nevertheless, some of the elements in the candidate market sequence must be antitrust markets, and they constitute what may be formally termed an antitrust market subsequence, which is an infinite sequence of candidate markets each of which actually is an antitrust market.

The Guidelines' restriction on the size of markets is the rule that there is a single relevant market in an antitrust market subsequence, and only it is used in the subsequent analysis. The Guidelines' Smallest Market Principle states that the one and only relevant market for the antitrust market subse-

460. This term and several in the following paragraphs do not appear in the Guidelines. The 1982 Guidelines used the similar term "provisional market." 1982 Merger Guidelines, *supra* note 7, § II.A. However, that term was used in a manner susceptible to a different and unfortunate interpretation, and it was so interpreted by critics. See Robert G. Harris & Thomas M. Jorde, *Market Definition in the Merger Guidelines: Implications for Antitrust Enforcement*, 71 CAL. L. REV. 464, 479-81 (1983). The term was deleted in the 1984 Merger Guidelines.

461. 1984 Merger Guidelines, *supra* note 1, §§ 2.13, 2.33. The shape restrictions perhaps were clearer in the 1982 Guidelines than in the 1984 Guidelines. The 1982 Guidelines specified that any product or area that is at least as good a substitute as any included in a market also must be included. 1982 Merger Guidelines, *supra* note 7, § I.A. n.12, § I.C. n.24. These footnotes were deleted in 1984, but the statement accompanying the release of the 1984 Guidelines stated that "no change in policy should be inferred from the deletion of a footnote." U.S. Dep't of Justice Statement Accompanying Release of 1984 Merger Guidelines, 4 Trade Reg. Rep. (CCH) ¶13,103, at 20,551 (June 14, 1984).

462. This statement refers to the 1982 and 1984 Merger Guidelines. A definition was added in the 1992 version. See 1992 Merger Guidelines, *supra* note 7, § 1.11 n.9 (The next-best substitute is "the alternative which, if available in unlimited quantities at constant prices, would account for the greatest value of diversion of demand.").

quence and the corresponding candidate market sequence "generally" is the smallest element in the antitrust market subsequence,⁴⁶³ that is, the only one contained in each of the others.⁴⁶⁴ Thus, there is a unique relevant market for every initial candidate market, that is, for every product and point of production of each merging firm. Of course, there is not just one relevant market for the analysis of a merger, because there are at least two merging firms and perhaps many products, and each has its own candidate market sequence with a relevant market. Even when the merging firms produce similar products, the relevant market delineated for one firm may be very different from that delineated for the other, and either may be the relevant market in which the merger is challenged.

A merger is horizontal if, and only if, either merging firm is in a relevant market delineated for the other. The relevant market delineated for one merging firm may be included in, and much smaller than, the relevant market delineated for the other. The merger, nevertheless, is horizontal in such cases. The Smallest Market Principle applies only within an antitrust market subsequence, and not across antitrust market subsequences. Quite unlike *Koppers*, *Rome Cable*, *Continental Can*, and *Times Mirror*, principles for delineating relevant markets determine whether the merging firms are in the same relevant market.⁴⁶⁵

463. It must be understood that each candidate market is a product and an area rather than a group of firms. Thus, the smallest market is not the smallest group of firms that would find it profitable to raise price significantly. In particular, a capacity constrained firm, which would not be necessary for a successful cartel, is not excluded from the market through the Smallest Market Principle. Scheffman & Spiller, *supra* note 445, at 126, misstate the Guidelines in this respect.

464. See 1984 Merger Guidelines, *supra* note 1, §§ 2.11, 2.31. The Guidelines do not specify the exceptions to the general rule. I have argued that it is appropriate to go a little further in the antitrust market subsequence, if doing so yields what I call a natural market boundary. Werden, *supra* note 445, at 533. A natural market boundary could be a political boundary in geographic space or Joan Robinson's "marked gap in the chain of substitutes." ROBINSON, *supra* note 17, at 17; see also *supra* note 18 and accompanying text. Natural market boundaries are convenient; they sound less artificial to judges; and they are likely to form the limits of the product and geographic space over which there is fairly direct competitive interaction.

There is likely to be significant uncertainty in estimates of the amount by which a hypothetical monopolist over any candidate market would raise price. It is sensible from either a policy or a litigation perspective to resolve close cases by opting for a larger market, particularly if doing so would not substantially change market shares. See Werden, *supra* note 445, at 532. Allowing for a safety margin in this way should not be considered an exception to the Smallest Market Principle. Using a price increase other than five percent (for some justifiable reason) also should not be considered an exception to the Smallest Market Principle. The principle is applied conditionally on the delineation of the antitrust market subsequence.

465. The flexibility in the choice of the price increase threshold translates into some flexibility in the determination of whether a merger is horizontal. See *supra* note 458.

Also unlike the prior case law, which tended to assume price discrimination,⁴⁶⁶ the Guidelines' approach to market delineation initially assumes that price discrimination is not possible and delineates markets on the basis of that assumption. Consequently, markets are delineated in geographic space on the basis of points of production, rather than points of consumption. If price discrimination is possible, the Guidelines delineate additional, smaller markets, on the basis of arbitrage possibilities.⁴⁶⁷ In the case of geographic discrimination, markets are delineated on the basis of the locations of consumers. If the cost of arbitrage among consumers is sufficiently high, each consumer may be in a distinct relevant market. If the cost of arbitrage over time is sufficiently high, each instant in time also may be in a distinct relevant market. For custom designed goods, each unit of output may be in a distinct relevant market.

Heretofore, the discussion has considered only substitutability. Complementarity raises important issues as well, and in the prior case law, complementarity was likely to result in a cluster market. The Guidelines do not employ this concept, but address complementarities in three ways. First, products are likely to be grouped together in an initial candidate market and thus also in a relevant market if they are such strong complements that they are nearly always sold bundled. Thus, a Honda Accord would be a possible initial candidate market, rather than individual parts or collections of parts for Honda Accords, and the relevant market for Honda Accords would be a group of models of cars.

Second, if products are such strong complements in demand that sellers could not profitably sell only some of them, the complementary products would not therefore be grouped in a single market, but only firms selling all of them could be considered as competitors in the relevant markets for the individual complements. If, contrary to apparent fact, bank customers insisted on buying all services from a single institution, then the only competitors in the relevant market for each banking service would be full-service banks.⁴⁶⁸

466. See, e.g., *United States v. Blue Bell, Inc.*, 395 F. Supp. 538, 542-43 (M.D. Tenn. 1975); see also *supra* text accompanying note 365.

467. See 1984 Merger Guidelines, *supra* note 1, §§ 2.13, 2.33.

468. In the two bank merger cases litigated by the Department of Justice since the 1982 Merger Guidelines were issued, the Justice Department did not base its challenge on the cluster of commercial banking services. *United States v. Central State Bank*, 621 F. Supp. 1276 (W.D. Mich. 1985), *aff'd*, 817 F.2d 22 (6th Cir. 1987); *United States v. Virginia Nat'l Bankshares, Inc.*, 1982-2 Trade Cas. (CCH) ¶ 64,871 (W.D. Va. 1982). In the former case, the court nevertheless found that the relevant market was the cluster of commercial banking services. *Central State Bank*, 621 F. Supp. at 1291-92.

Finally, the Guidelines state that "nearly universal" supply substitutability among products may lead to the "use [of] an aggregate description of those markets as a matter of convenience."⁴⁶⁹ This aggregation of markets is a mere convenience used when, because of supply substitutability, the proper measure of shares would be the same for many distinct relevant markets. Price discrimination markets are likely to be aggregated as a matter of convenience.

Aggregation as a matter of convenience is precisely what the Supreme Court did in *Brown Shoe* rather than further divide children's shoes into age- and sex-based markets.⁴⁷⁰ It is also what the Court did without even thinking in aggregating various sizes of shoes into a single market. A size eight model of a particular shoe is a poor substitute for a size ten from the point of view of consumers, but essentially a perfect substitute from the point of view of producers.⁴⁷¹

C. The Guidelines' Approach and Its Predecessors

The Guidelines' approach to market delineation has been called their "most innovative"⁴⁷² aspect, and that is a reasonable characterization. However, the Guidelines were not as original as many observers may have believed.⁴⁷³ The main idea upon which the Guidelines' approach is built is that market delineation must be closely linked to the ultimate goal of identifying mergers that create or enhance market power, and that idea goes back

469. 1984 Merger Guidelines, *supra* note 1, § 2.21 n.9; 1992 Merger Guidelines, *supra* note 7, § 1.321 n.14.

470. *Brown Shoe Co. v. United States*, 370 U.S. 294, 327-28 (1962); *see also supra* text accompanying notes 254-55.

471. The one difference between the Guidelines' approach on this point and that of the prior case law is that, technically at least, the Guidelines' approach would refer to an aggregate description of the relevant markets, rather than to a single aggregated market. For example, in delineating the relevant market for hospital services, one might refer to many markets in an aggregate description like "markets for inpatient, acute care services," which typically is loosely referred to as "the market for inpatient, acute care services."

The alleged relevant market in the Justice Department's post-1982 Guidelines hospital merger cases has been acute inpatient services. *E.g.*, *United States v. Rockford Memorial Corp.*, 717 F. Supp. 1251, 1260-61 (N.D. Ill. 1989), *aff'd*, 898 F.2d 1278 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990); *United States v. Carilion Health Sys.*, 707 F. Supp. 840, 847 (W.D. Va.), *aff'd*, 1989-2 Trade Cas. (CCH) ¶ 68,859 (4th Cir. 1989).

472. *See* William F. Baxter, *Responding to the Reaction: The Draftsman's View*, 71 CAL. L. REV. 618, 622 (1983); Lawrence A. Sullivan, *The New Merger Guidelines: An Afterword*, 71 CAL. L. REV. 632, 638 (1983).

473. One of my reasons for writing this Article is that I was not aware of much of the work that preceded the 1982 Merger Guidelines when I was working on the 1982 and 1984 Guidelines. They are not as original as I had thought either. In the following paragraphs, I generally omit references to my own work, *see supra* notes 443-46 and accompanying text, which anticipated the Guidelines' approach almost completely.

much further than 1982. The Supreme Court may have been the first to express it in the *Cellophane* case,⁴⁷⁴ and in 1959 Morris Adelman clearly expressed the idea.⁴⁷⁵ By 1982 the idea was also in the two leading antitrust treatises—those by Areeda and Turner⁴⁷⁶ and by Sullivan.⁴⁷⁷ Like the Guidelines, Areeda and Turner⁴⁷⁸ and Boyer⁴⁷⁹ even phrased the issue in terms of a hypothetical monopolist or cartel.

The idea of translating market power into a price increase test also was not new. It was at least implicit in the recommendations of the Stigler Task Force concerning the 1968 Guidelines,⁴⁸⁰ and it was quite explicit in the works of Posner⁴⁸¹ and Areeda and Turner.⁴⁸² In fact, Posner and Areeda and Turner even suggested a significance threshold of about five percent.

The idea of delineating a market centered on a particular firm went back to the monopolistic competition literature and the Mason-Bain-Stigler conception of a market.⁴⁸³ In addition, Boyer brought the idea up to date and married it with the idea of linking market delineation to market power.⁴⁸⁴ The idea that the relevant market should be unique was expressed by several commentators, notably Hale and Hale⁴⁸⁵ and Adelman,⁴⁸⁶ and Adelman and Sullivan⁴⁸⁷ both expressed what is essentially the Smallest Market Principle. Finally, the idea of markets delineated on the basis of price discrimination was expressed by Turner and by Barnes.⁴⁸⁸

The one entirely novel aspect of the Guidelines' approach to market delineation was the separation of the delineation of the market from the identification of the competitors in the market. This distinction manifests itself in the Guidelines' innovative treatment of supply substitutability and in the Guidelines' conception of an antitrust market as a product and area rather than either a group of firms or a group of customers.

The Guidelines also were innovative in offering a comprehensive approach to the problem of market delineation. The Guidelines did not just

474. See *supra* notes 74–76 and accompanying text.

475. See *supra* note 133 and accompanying text.

476. See *supra* note 434 and accompanying text.

477. See *supra* note 432 and accompanying text.

478. See *supra* note 434 and accompanying text.

479. See *supra* note 441 and accompanying text.

480. See *supra* notes 336–39 and accompanying text.

481. See *supra* note 340 and accompanying text.

482. See *supra* notes 434–35 and accompanying text.

483. The idea of firm-centered market dates back to 1934. See *supra* note 22.

484. See *supra* note 441 and accompanying text.

485. See *supra* note 267 and accompanying text.

486. See *supra* note 133 and accompanying text.

487. See *supra* notes 134 and 432 and accompanying text.

488. See *supra* note 166.

offer suggested treatments for the various issues in merger cases, but rather provided an integrated approach, with each step in the paradigm carefully crafted to be used in conjunction with all the others. There was nothing like that in the prior economic or legal literature, or in the case law.

Finally, the Guidelines were innovative in their treatment of the delineation of the geographic dimensions of markets and in their treatment of price discrimination. The case law, especially *Tampa Electric*,⁴⁸⁹ and scholarly literature delineated the geographic dimensions of a market on the basis of the locations of consumers or the locations of both producers and consumers. Under the Guidelines, markets are initially delineated under the assumption that price discrimination is not possible, and in doing so markets are delineated on the basis of points of production, rather than points of consumption. The Guidelines approach better focuses the analysis on the real issue of identifying the important competitors of the merging firms. If price discrimination is possible, the Guidelines permit the delineation of additional markets by identifying groups of customers that could be discriminated against.

While not innovative in this aspect, the Guidelines notably departed from all of the specific tests the Supreme Court had applied. This included the practical indicia from *Brown Shoe*⁴⁹⁰ and the cross-elasticity-of-demand test from *Cellophane*. A critical difference between the Guidelines' approach and many other tests including cross-elasticity of demand is that those tests consider substitution possibilities only two products at a time, while the Guidelines simultaneously consider all substitution possibilities between the products and area in a candidate market and substitutes outside of that market.⁴⁹¹ Rather than consider the individual cross-elasticities of demand between the candidate market and substitutes, the Guide-

489. *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320 (1961).

490. This point has been misunderstood. See Thomas W. Dunfee et al., *Bounding Markets in Merger Cases: Identifying the Relevant Competitors*, 78 NW. U. L. REV. 733, 755 (1984) (stating that the Guidelines place "[u]ndue emphasis on faulty *Brown Shoe* indicia"); Robert A. Rogowsky, *The Justice Department's Merger Guidelines: A Study in the Application of the Rule*, 6 RES. L. & ECON. 135, 159 (1984) (stating that the Guidelines "largely incorporate the *Brown Shoe* criteria").

These critics pointed to sections in the Guidelines indicating the sorts of evidence deemed relevant. 1984 Merger Guidelines, §§ 2.12, 2.32. Although these sections did not mention the *Brown Shoe* indicia, they may have suggested tests that were not actually used, and they were deleted in the 1992 revisions.

491. This point has also been misunderstood. See Kenneth D. Boyer, *Is There a Principle for Defining Industries? Reply*, 52 S. ECON. J. 542, 542 (1985) (stating that "[t]he guidelines are based on bilateral substitutabilities"). The Guidelines are based on bilateral substitutabilities only in the very limited sense that they consider next-best substitutes one at a time, unless several are equally good.

lines consider the elasticity of demand for the candidate market; rather than ask how much substitution there would be to particular alternatives as price in the candidate market is increased, the Guidelines ask how much sales in the candidate market would fall. Many not-especially-good substitutes could cause a candidate market not to be an antitrust market even though there is no one particularly good substitute.⁴⁹² In addition, factors other than demand elasticities may be vitally important in determining the profit-maximizing price increase for a candidate market, and they are considered as well under the Guidelines.⁴⁹³

D. *Application of the Guidelines' Approach*

Although the Guidelines' approach to market delineation has been called their "most important contribution"⁴⁹⁴ and their "noteworthy intellectual feat,"⁴⁹⁵ it also has been subject to considerable criticism. Particularly between 1982 and 1985, a common criticism was that the Guidelines' approach to market delineation was purely theoretical and not very useful.⁴⁹⁶ It is certainly true that the Guidelines' approach to market delineation lacks practicality in the sense that it is neither simple nor mechanical. The Guidelines provided a way of thinking about the issue and evaluating

492. If any significant increase above prevailing prices would cause very large numbers of consumers to simply do without, rather than switch to substitutes, the Guidelines' approach may lead to the odd conclusion that the relevant market encompasses all consumer goods. While odd, this conclusion leads to the proper policy conclusions about mergers. In practice, the conclusion that a merger would not increase prices likely would be reached without formally delineating the relevant market.

493. For further elaboration on these points, see Luke M. Froeb & Gregory J. Werden, *Residual Demand Estimation for Market Delineation: Complications and Limitations*, 6 REV. INDUS. ORGANIZATION 33, 35-36 (1991) (deriving a formula incorporating elasticity of demand and all other factors affecting the amount by which a monopolist over a candidate market would increase price); Werden, *supra* note 445, at 572-74 (comparing the Guidelines' approach to the cross-elasticity-of-demand test); Gregory J. Werden, *A Closer Analysis of Antitrust Markets*, 62 WASH. U. L.Q. 647, 656-57 (1985) (comparing the Guidelines' approach to any approach based on a pairwise assessment of substitution possibilities); Werden, *supra* note 268, at 115-17 (emphasizing the importance of the premerger gap between price and marginal cost in delineating markets under the Guidelines).

494. Donald I. Baker & William Blumenthal, *The 1982 Guidelines and Preexisting Law*, 71 CAL. L. REV. 311, 322 (1983).

495. See Janusz A. Ordover & Robert D. Willig, *The 1982 Department of Justice Merger Guidelines: An Economic Assessment*, 71 CAL. L. REV. 535, 539 (1983).

496. See Dunfee et al., *supra* note 490, at 754-55 (stating that the Guidelines' approach is "impractical."); Harris & Jorde, *supra* note 460, at 481 (same); Stigler & Sherwin, *supra* note 15, at 582 (stating that the Guidelines' definition of an antitrust market is "completely nonoperational" because "[n]o method of investigation of data is presented, and no data, even those produced by coercive process, are specified that will allow the market to be determined empirically"); Joe Sims & William Blumenthal, *New Merger Guidelines Provide No Real Surprises*, LEGAL TIMES, June 21, 1982, at 17 (stating that the Guidelines do not provide a "useful practical test").

evidence, and the importance of that contribution cannot be overstated. It was an especially significant accomplishment given the state of the prior case law.⁴⁹⁷

An excellent illustration of the potential power of the Guidelines' approach comes from *United States v. Archer-Daniels-Midland Co.*,⁴⁹⁸ a recent merger case that involved high fructose corn syrup (HFCS), a liquid sweetener made from corn. In 1982, ADM took long-term leases with options for renewal and purchase from Nabisco on its HFCS facilities. The Department of Justice filed suit,⁴⁹⁹ challenging the transaction under Section 7, and, after several years of discovery, both sides moved for summary judgment on the question of whether the relevant market for HFCS included sugar.

Since HFCS became a commercial product in the early 1970s, it had always been substantially cheaper than sugar on a sweetness equivalency basis, largely because the price of sugar had been inflated by government price supports. Data published by the Department of Agriculture indicate that the price of sugar was ten percent to fifty percent higher than that of the most common form of HFCS.⁵⁰⁰ Although HFCS is not a good alternative to sugar in all uses, by the end of 1984 HFCS had replaced sugar in those uses (notably soft drinks) in which price on a sweetness equivalency basis is the criterion for selection of a sweetener. Applying the Guidelines, the Department of Justice argued that an HFCS monopolist would be able to raise price significantly without inducing significant substitution to sugar, so sugar is not in the relevant market. The district court rejected this argument,⁵⁰¹ but the court of appeals accepted it.⁵⁰²

Few cases have facts as simple and tailor-made for application of the Guidelines as *Archer-Daniels-Midland*. The Guidelines' approach to market delineation can be implemented nevertheless, using the information that is available. Given transportation cost and F.O.B. price data, it is possible to simulate the effects of various price increases for a group of sellers on

497. See Robert Pitofsky, *New Definitions of Relevant Market and the Assault on Antitrust*, 90 COLUM. L. REV. 1805, 1822 (1990).

498. 695 F. Supp. 1000 (S.D. Iowa 1987), *rev'd*, 866 F.2d 242 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989).

499. Although it seems clear that the government was correct in its position that HFCS was the relevant market when the case was decided, it is less clear that the Department of Justice was correct in its assessment at the time the merger was challenged.

500. See U.S. DEP'T OF AGRICULTURE, SUGAR AND SWEETENER: SITUATION AND OUTLOOK REPORT (1989). The data are for HFCS 55, which is 55% fructose and the HFCS product primarily used by the soft drink companies—the most important users of HFCS.

501. See *Archer-Daniels-Midland*, 695 F. Supp. at 1017–21.

502. See *Archer-Daniels-Midland*, 866 F.2d at 244–46.

their sales area. In this way, it is possible to estimate the profit effects of the price increases and delineate geographic market boundaries.⁵⁰³ As discussed below, econometric techniques, particularly residual demand estimation, also can be used to delineate both the geographic and product boundaries of markets.⁵⁰⁴

It also should be understood that the practical application of the Guidelines' approach inevitably lacks the mathematical rigor of the description in the previous section. When particular issues arise in market delineation, the rigorous approach is there to provide a theoretical basis for their resolution; however, there is no attempt to follow precisely each step of the process as described. Moreover, the available information may necessitate crude judgments rather than precise calculations.

E. Continuing Criticisms of the Guidelines' Approach

A widespread and continuing criticism of the Guidelines' approach to market delineation has been that the Guidelines commit the *Cellophane* fallacy⁵⁰⁵ by considering the profit-maximizing price increase above prevailing levels. As Posner explained,⁵⁰⁶ the *Cellophane* fallacy does not normally arise in merger cases, because the issue is not whether market power is being exercised, but whether the merger would create or enhance market power. There are, however, exceptions to this general rule. Consider the following scenario.

As a result of some form of unstable collusion, price in a candidate market has risen significantly (demonstrating that the candidate market was an antitrust market) and to a point at which a monopolist over that market would increase price less than five percent. A merger would increase the stability of the ongoing collusion, and a merger to monopoly would solidify it completely. In either case, the merger would cause prices (at least, expected prices) to be higher than they otherwise would be. This effect on price may constitute sufficient grounds for prohibiting the merger, depending on its magnitude and any efficiency effects the merger may have.

503. This can be done simply, by drawing sellers on a map and plotting the points of equalization for delivered prices from competing sellers. It can also be done through the use of complicated models. For example, the Department of Justice delineated relevant markets for the Western coal industry using a consulting firm's model of the coal and electric utilities industries. U.S. DEP'T OF JUSTICE, *COMPETITION IN THE COAL INDUSTRY* 24-47 (1978).

504. See *infra* text accompanying notes 561-66.

505. See *supra* note 91 and accompanying text.

506. POSNER, *supra* note 331, at 128-29; see also Baxter, *supra* note 472, at 623-24 n.35; Lawrence J. White, *Antitrust and Merger Policy: A Review and Critique*, 1 J. ECON. PERSP. 13, 15 (1987); *supra* text accompanying note 430.

Invoking some version of the scenario, many critics have contended that the Guidelines are guilty of the *Cellophane* fallacy.⁵⁰⁷ They argue that the Guidelines would base market delineation on the prevailing price and delineate an overly broad market, potentially resulting in the failure to challenge a significantly anticompetitive merger. This unfortunate result could be avoided, the argument goes, by using the competitive price as the base price for market delineation rather than the prevailing price. Indeed, implicit in the arguments made by many of these critics is the proposition that the competitive price should always be the base price for market delineation.⁵⁰⁸

This argument fundamentally misstates the Guidelines' analysis of the postulated scenario. If it were determined that prices would likely fall but for the merger, then the level to which prices would likely fall is the level of "likely future prices," which would serve as the bench mark for assessing the merger's effects on market power. Thus, if the facts indicate that the postulated scenario is the relevant one, the Guidelines do exactly what the critics assert they should do.

The only real issue is what should be done when the facts do not indicate that the postulated scenario is the relevant one. The critics argue for the use of the competitive price, but the Guidelines do not use it. The Guidelines' approach certainly is preferable if the relevant scenario is not collusion at all, but rather any number of stable oligopoly equilibria.⁵⁰⁹ Using the competitive rather than the prevailing price could lead to either of two serious errors. Mergers among firms in the same relevant market using the competitive base price may be challenged even though good substitutes at the prevailing price prevent such mergers from raising prices. Mergers involving one firm in the relevant market using the competitive base price, and one firm not in that market but in the relevant market using the prevailing price as the base, may not be challenged even though they would

507. See PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW 477-79 (Supp. 1990); Fisher, *supra* note 19, at 28-30; Harris & Jorde, *supra* note 460, at 483-84; Ordover & Willig, *supra* note 495, at 542-43; Pitofsky, *supra* note 497, at 1823-24; Schaerr, *supra* note 91, at 683-89; Richard Schmalensee, *Horizontal Merger Policy: Problems and Changes*, 1 J. ECON. PERSP. 41, 47-48 (1987).

508. If the Guidelines' approach to market delineation were to be applied in a Section 2 context, it would be necessary, of course, to use the competitive price as the bench mark. In addition, it may make sense to use a higher threshold for significant market power in a Section 2 context because of the differing implications of imposing liability in Section 2 and Section 7 cases. The market delineation principles would be the same, although the result would be different.

509. The 1992 Guidelines specify that the prevailing price will be used "unless premerger circumstances are strongly suggestive of coordinated interaction." 1992 Merger Guidelines, *supra* note 7, § 1.11.

raise price. Moreover, having to determine the competitive price would introduce additional complications and uncertainties into the process.

A second continuing criticism of the Guidelines' approach to market delineation is that it was designed and is applied to produce overly broad markets and thereby weaken antitrust enforcement.⁵¹⁰ Apart from several misunderstandings,⁵¹¹ there appear to be two basic contentions. One is that "the Guidelines quickly pass over evidence of real events such as past prices and shipment patterns, and emphasize instead hypothetical estimates."⁵¹² The argument seems to be that one should not look beyond historical data or actual experience in delineating markets.⁵¹³ If so, it is simply wrong. The task of merger analysis is to peer into the future and determine whether a proposed merger would create or enhance market power. Historical data are always the best place to start, but as explained more fully below,⁵¹⁴ historical data cannot really tell us what we want to know. If one refuses to look beyond the historical data, one is likely to overlook critically important information.

A second contention is that the five-percent criterion for significance is too "generous" in the sense that it allows too much scope for market power.⁵¹⁵ This argument erroneously treats the five-percent criterion as a tolerance level for market power. Under the Guidelines, five percent is the minimum amount by which merger to monopoly would raise price. Mergers that actually are proposed and challenged under the Guidelines typically would be far from merger to monopoly and would increase price far less than merger to monopoly. If it works out that using a four-percent test

510. See Harris & Jorde, *supra* note 460, at 486; Horizontal Merger Guidelines of the National Association of Attorneys General, § 4 n.31 (1987), reprinted in 4 Trade Reg. Rep. (CCH) ¶13,405, No. 256 (Mar. 30, 1993) [hereinafter NAAG Horizontal Merger Guidelines]; Pitofsky, *supra* note 497, at 1808, 1822-23.

511. See Gregory J. Werden, *Market Delineation Under the NAAG Merger Guidelines: Realities or Illusions?*, 35 CLEV. ST. L. REV. 403, 410-22 (1987) (explaining that the criticisms of Harris & Jorde, *supra* note 460, at 486, are largely based on several misunderstandings).

512. Pitofsky, *supra* note 497, at 1823.

513. This is precisely the point made in the 1993 edition of the NAAG Horizontal Merger Guidelines, which insist on "empirical evidence" of substitution, "as contrasted with expert opinion, speculation, or economic theories." NAAG Horizontal Merger Guidelines, *supra* note 510, § 3 and n.20.

514. See *infra* notes 541-42.

515. See Pitofsky, *supra* note 497, at 1839-40. Pitofsky argued that a five-percent price increase would, on average, lead to over a fifty-percent increase in profits, and that would entail too much market power. The factual predicate of this argument is dubious at best. More importantly, Pitofsky offers no basis for associating profit increases with amounts of market power that should, or should not, be tolerated—amounts that would be determined by a complicated welfare calculation considering, in addition to market power, likely efficiencies from mergers, deterrence effects, and administrative costs.

for market delineation would lead to the conclusion that a merger is seriously anticompetitive, while a five-percent test would lead to a very different conclusion, the four-percent test would be used under the Guidelines.⁵¹⁶ Moreover, if a much lower threshold were substituted for five percent, the result would be smaller markets in all cases. Many mergers that would be horizontal under the five-percent criterion would not be horizontal under a much lower threshold. Lowering the threshold, thus, could weaken enforcement in precisely the way the critics want to avoid.

VI. MARKET DELINEATION IN THE LOWER COURTS SINCE 1982, AND EMPIRICAL METHODS FOR MARKET DELINEATION

A. Market Delineation in the Lower Courts, 1982-92

The lower courts did not suddenly change their approach to market delineation when the Merger Guidelines were released in 1982, but the case law on market delineation since the Guidelines bears little resemblance to that of the prior two decades. Courts have continued to cite the *Brown Shoe* practical indicia,⁵¹⁷ but they generally have cited them without actually applying them.⁵¹⁸ Two circuits have held that the practical indicia are merely "evidentiary proxies for direct proof of substitutability,"⁵¹⁹ and one of them has reinterpreted the practical indicia in market power terms.⁵²⁰

516. See *supra* note 458.

517. Since the 1982 Merger Guidelines were issued, eight of the twelve regional circuit courts of appeals have recited the practical indicia. *Tunis Bros. Co. v. Ford Motor Co.*, 952 F.2d 715, 723 (3d Cir. 1991), *cert. denied*, 1125 S. Ct. 3034 (1992); *T. Harris Young & Assoc., Inc. v. Marquette Elecs., Inc.*, 931 F.2d 816, 824 (11th Cir.), *cert. denied*, 112 S. Ct. 658 (1991); *Omni Outdoor Advertising, Inc. v. Columbia Outdoor Advertising, Inc.*, 891 F.2d 1127, 1140 n.6 (4th Cir. 1989), *rev'd on other grounds*, 111 S. Ct. 1344 (1991); *Thurman Indus., Inc. v. Pay 'N Pak Stores, Inc.*, 875 F.2d 1369, 1375 (9th Cir. 1989); *H.J., Inc. v. International Tel. & Tel. Corp.*, 867 F.2d 1531, 1540 (8th Cir. 1989); *Rothery Storage & Van Co. v. Atlas Van Lines, Inc.*, 792 F.2d 210, 218 (D.C. Cir. 1986), *cert. denied*, 479 U.S. 1033 (1987); *Jayco Sys., Inc. v. Savin Business Machs. Corp.*, 777 F.2d 306, 319 (5th Cir. 1985), *cert. denied*, 479 U.S. 816 (1986); *White & White, Inc. v. American Hosp. Supply Corp.*, 723 F.2d 495, 501 (6th Cir. 1983).

518. The practical indicia actually were applied in two cases, however. *FTC v. Warner Communications Inc.*, 742 F.2d 1156, 1163 (9th Cir. 1984); *Ansell, Inc. v. Schmid Lab., Inc.*, 757 F. Supp. 467, 472-74 (D.N.J.), *aff'd without opinion*, 941 F.2d 1200 (3d Cir. 1991).

519. *H.J., Inc.*, 867 F.2d at 1540; *Rothery Storage & Van Co.*, 792 F.2d at 218; *cf. White & White, Inc.*, 723 F.2d at 500 ("[A] submarket analysis incorporates, but does not replace, the standard market test.").

520. In *Rothery Storage & Van Company*, the D.C. Circuit stated its reinterpretation of the practical indicia as follows:

The first group of indicia mentioned in *Brown Shoe* relates to the ability of the consumer to obtain substitutes for a product and, therefore, goes directly to the economic criteria that make one market distinct from another. One factor is "unique production facilities." If a product requires unique production facilities, and the producer raises the price above the competitive level, the ability of other producers to shift resources to make

While not explicitly criticizing *Brown Shoe*, two district courts have held that "the personal preferences of a distinct group of consumers does not suffice for defining a separate product market,"⁵²¹ effectively rejecting distinct customers as a criterion for market delineation. Finally, one circuit has essentially banished the submarket concept:

The use of the term "submarket" is to be avoided; it adds only confusion to an already imprecise and complex endeavor. For antitrust purposes a product group or geographic area either meets the listed criteria, in which case it is a relevant market; or it does not, in which case it is irrelevant for purposes of analysis. No fiddling with nomenclature will change the analysis or result.⁵²²

Since 1982, courts also have frequently looked beyond Supreme Court precedent for authority on market delineation. A substantial portion of the language quoted above from Sullivan⁵²³ has been quoted or paraphrased by four circuit courts⁵²⁴ and district courts in four other circuits.⁵²⁵ It may be

the product would be limited, and the market definition should be likewise limited. "[D]istinct prices" and "sensitivity to price changes" also relate directly to the economic definition of a market. The first suggests that cross-elasticity of demand is low, the second that it is high.

The second set of indicia bear less directly upon the economic definition of a market, representing observations about what one ordinarily observes when a market is distinct. The "industry or public recognition of the submarket as a separate economic" unit matters because we assume that economic actors usually have accurate perceptions of economic realities. The "product's peculiar characteristics" refers to the general truth that substitutes in a market often have a strong physical and functional relationship. Both "distinct customers" and "specialized vendors" may indicate unique product attributes, which refers again to the fact that products with distinct physical and functional attributes tend to be priced differently. These factors may be helpful where the other indicia are ambiguous. 792 F.2d at 218 n.4. The idea of this exercise would seem to be that the practical indicia really did make sense, but they had been misunderstood by the lower courts for over 20 years.

521. *U.S. Healthcare, Inc. v. Healthsource, Inc.*, 1992-1 Trade Cas. (CCH) ¶ 69,697, at 67,180 (D.N.H. 1992), *aff'd*, 986 F.2d 589, (1st Cir. 1993); *FTC v. R.R. Donnelley & Sons Co.*, 1990-2 Trade Cas. (CCH) ¶ 69,239, at 64,854 (D.D.C. 1990).

522. *Satellite Television & Associated Resources, Inc. v. Continental Cablevision of Va., Inc.*, 714 F.2d 351, 355 n.5 (4th Cir. 1983), *cert. denied*, 465 U.S. 1027 (1984); *cf. In re Air Passenger Computer Reservation Sys. Antitrust Litig.*, 694 F. Supp. 1443, 1454 n.9 (C.D. Cal. 1988) ("The term submarket will not be used in this memorandum because the prefix 'sub' merely creates confusion and is superfluous."). There remain, however, occasional decisions that find a submarket that is not a market. *E.g.*, *Olin Corp. v. FTC*, 986 F.2d 1295, 1303-04 (9th Cir. 1993); *Hendricks Music Co. v. Steinway, Inc.*, 689 F. Supp. 1501, 1534-39 and n.7 (N.D. Ill. 1988).

The Merger Guidelines also prompted a law review article that argued for the abandonment of the submarket concept. See Lawrence C. Maisel, *Submarkets in Merger and Monopolization Cases*, 72 GEO. L.J. 39 (1983).

523. SULLIVAN, *supra* note 90, at 41; see also *supra* text accompanying note 432.

524. See *Westman Comm'n Co. v. Hobart Int'l, Inc.*, 796 F.2d 1216, 1222 (10th Cir. 1986), *cert. denied*, 486 U.S. 1005 (1988); *Rothery Storage & Van Co.*, 792 F.2d at 218; see also *Dimmitt Agri Indus., Inc. v. CDC Int'l Inc.*, 679 F.2d 516, 526 n.7 (5th Cir. 1982), *cert. denied*, 460 U.S.

coincidence, but no reported circuit court opinion and only one reported district court opinion did so before the 1982 Guidelines were released.⁵²⁶ In addition, two circuits⁵²⁷ and one district court⁵²⁸ that have not quoted the Sullivan passage have quoted a passage from a supplement to the Areeda and Turner treatise that is even closer to the Guidelines' approach. That passage defines a market as "any grouping of sales whose sellers, if unified by hypothetical cartel or merger, could raise prices significantly above the competitive level."⁵²⁹ In addition, one circuit court has paraphrased, and one district court has quoted the similar language in the original treatise.⁵³⁰

The Guidelines' approach has been applied by several courts. The best example is probably the *Archer-Daniels-Midland* case. As explained above,⁵³¹ the case involved HFCS and the issue presented for summary judgment was whether sugar was in the relevant market. The defendants argued, and the district court found, that the proper tests for market delineation were "interchangeability of use, cross-elasticity of demand, and price correlation," and these tests were found to place sugar in the relevant

1082 (1983) (quoting only the beginning of the passage); *Home Placement Serv., Inc. v. Providence Journal Co.*, 682 F.2d 274, 280 (1st Cir. 1982), *cert. denied*, 460 U.S. 1028 (1983); *Satellite Television & Associated Resources, Inc.*, 714 F.2d at 356.

525. Three different district courts in the Third Circuit have cited the passage. *Bascom Food Prods. Corp. v. Reese Finer Foods, Inc.*, 715 F. Supp. 616, 627 (D.N.J. 1989); *Kalmanovitz v. G. Heileman Brewing Co.*, 576 F. Supp. 922, 927 (D. Del. 1983); *Pontius v. Children's Hosp.*, 552 F. Supp. 1352, 1365 (W.D. Pa. 1982). A single district has quoted the passage in the Second, Eighth, and Eleventh Circuits. *Midwest Radio Co. v. Forum Publishing Co.*, 1990-1 Trade Cas. (CCH) ¶ 69,082, at 63,959 (D.N.D. 1989); *E.T. Barwick Indus., Inc. v. Walter E. Heller & Co.*, 692 F. Supp. 1331, 1344 (N.D. Ga. 1987); *New York Citizens Comm. on Cable TV v. Manhattan Cable TV, Inc.*, 651 F. Supp. 802, 807 (S.D.N.Y. 1986).

526. The Sullivan treatise was published in early 1977. The Guidelines were released on June 14, 1982. The first reported circuit court opinion to quote the passage from Sullivan was issued on June 18, 1982. *Home Placement Serv., Inc.*, 682 F.2d at 280. The first reported district court opinion to quote the passage from Sullivan was issued on August 31, 1981. *Robinson v. McGovern*, 521 F. Supp. 842, 877 (W.D. Pa. 1981), *aff'd*, 688 F.2d 824 (3d Cir.), *cert. denied*, 459 U.S. 971 (1982).

527. *Virtual Maintenance, Inc. v. Prime Computer, Inc.*, 957 F.2d 1318, 1325 (6th Cir. 1992); *H.J., Inc. v. International Tel. & Tel. Corp.*, 867 F.2d 1531, 1540 (8th Cir. 1989).

528. *See In re Air Passenger Computer Reservation Sys. Antitrust Litig.*, 694 F. Supp. 1443, 1457 (C.D. Cal. 1988).

529. AREEDA & HOVENKAMP, *supra* note 507, at 463. The courts actually cited to the 1987 version of this work, but the quoted passage has remained the same since.

530. *Consul, Ltd. v. Transco Energy Co.*, 805 F.2d 490, 495 (4th Cir. 1986) ("The penultimate question, towards which this preliminary inquiry into market definition is directed, is whether the defendant has market power; the ability to raise prices above levels that would exist in a perfectly competitive market."), *cert. denied*, 481 U.S. 1050 (1987); *Bhan v. NME Hosps., Inc.*, 669 F. Supp. 998, 1018 (E.D. Cal. 1987), *aff'd*, 929 F.2d 1404 (9th Cir.), *cert. denied*, 112 S. Ct. 617 (1991).

531. *See supra* notes 498-502 and accompanying text.

market for HFCS.⁵³² Applying the Guidelines, the Government argued on appeal that sugar was not in the relevant market because there would be no significant substitution from HFCS to sugar unless the prices of the two were the same on a sweetness equivalency basis, and that the price of HFCS could be increased significantly and still be below that of sugar on a sweetness equivalency basis. The court of appeals agreed:

[A] monopolist of HFCS will be able to raise the price of HFCS to just below the supported price of sugar before being constrained by the competitive forces of sugar. In other words, the HFCS monopolist is able to exercise excess market power. . . . The price differential between sugar and HFCS . . . is sufficient to show that sugar is not reasonably interchangeable with HFCS and thus does not belong in the same relevant product market with HFCS.⁵³³

In addition, a district court applied the Guidelines' test when it ruled in favor of the Government on market delineation,⁵³⁴ and three district courts applied the Guidelines' test when they ruled against the Government on market delineation.⁵³⁵ The Guidelines' approach to market delineation also has been referred to or quoted approvingly when not actually applied. One circuit court and several district courts have quoted extensively from the Guidelines' discussion of market delineation, and two other circuits have referred to the Guidelines approach, if only briefly.⁵³⁶ The Guidelines' approach to market delineation also has been adopted by the Federal Trade Commission⁵³⁷ and in large part by the Canadian antitrust enforcement

532. *United States v. Archer-Daniels-Midland Co.*, 695 F. Supp. 1000, 1010-11 (S.D. Iowa 1987), *rev'd*, 866 F.2d 242 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989).

533. *United States v. Archer-Daniels-Midland Co.*, 866 F.2d 242, 246 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989); *see also* *U.S. Healthcare, Inc. v. Heathsource, Inc.* 986 F.2d 589, 599 (1st Cir. 1993) (applying the Guidelines' hypothetical monopolist paradigm but not citing the Guidelines).

534. *See United States v. Rockford Memorial Corp.*, 717 F. Supp. 1251, 1259, 1261, 1277 (N.D. Ill. 1989), *aff'd*, 898 F.2d 1278 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990).

535. *See United States v. Rank Org. PIC*, 1990-2 Trade Cas. (CCH) ¶ 69,257, at 64,948 (C.D. Cal. 1990); *United States v. Country Lake Foods, Inc.*, 754 F. Supp. 669, 672-73, 675-76 (D. Minn. 1990); *FTC v. R.R. Donnelley & Sons Co.*, 1990-2 Trade Cas. (CCH) ¶ 69,239, at 64,854 (D.D.C. 1990).

536. *See Olin Corp. v. FTC*, 986 F.2d 1295, 1299-1300 (9th Cir. 1993); *Ansell, Inc. v. Schmid Lab., Inc.*, 757 F. Supp. 467, 475 (D.N.J.), *aff'd without opinion*, 941 F.2d 1200 (3d Cir. 1991); *FTC v. Owens-Illinois, Inc.*, 681 F. Supp. 27, 34 n.17, 38 n.32 (D.D.C.), *vacated as moot*, 850 F.2d 694 (D.C. Cir. 1988); *Drs. Steuer and Latham, P.A. v. National Medical Enters., Inc.*, 672 F. Supp. 1489, 1510 n.16 (D.S.C. 1987); *Consolidated Gas Co. of Fla. v. City Gas Co. of Fla.*, 665 F. Supp. 1493, 1517 (S.D. Fla. 1987), *aff'd*, 880 F.2d 297 (11th Cir. 1989), *vacated*, 889 F.2d 264 (11th Cir. 1989) (*en banc*), *reinstated*, 912 F.2d 1262 (11th Cir. 1990) (*per curiam*), *cert. granted and remanded*, 111 S. Ct. 1300, *vacated as moot*, 931 F.2d 710 (11th Cir. 1991).

537. On April 2, 1992, the FTC and the Department of Justice issued joint Merger Guidelines. Before that, the FTC had begun to follow the 1984 Merger Guidelines. *See Owens-Illinois*,

agency.⁵³⁸ All this is particularly notable in light of the prediction made by two commentators in 1982 that "no one (including the Antitrust Division) really will use" the Guidelines' approach to market delineation.⁵³⁹

B. An Overview of Empirical Methods for Market Delineation

Before the issuance of the 1982 Merger Guidelines, the economic literature on empirical methods for market delineation was rather sparse. Since the Guidelines, more than a dozen papers have appeared. There seems little doubt that the Guidelines helped to spur interest in this area of research. A detailed review of this literature is beyond the scope of this paper,⁵⁴⁰ but the major themes are instructive. Before doing so, however, it is important to consider the inherent limitations of historical data.

The antitrust analysis of a proposed merger is a predictive exercise—an attempt to gauge the likely effects of the merger on prices or other aspects of market performance. This is essentially true as well for the market delineation step in the analysis. We must attempt to judge the extent to which a price increase in a candidate market would induce substitution. Only in very rare instances will history have performed the critical experiment of raising prices in the candidate market. Thus, the data available for analysis normally cannot directly inform us about the critical substitution issues. For this reason, all empirical methods for market delineation have significant limitations.

Many of these limitations are unique to particular methods; however, two are completely general.⁵⁴¹ First, any reliance on historical data normally will require an extrapolation beyond the data because we must pre-

Inc., 5 Trade Reg. Rep. (CCH) ¶ 23,162, at 22,812–21 (1992); Olin Corp., 5 Trade Reg. Rep. (CCH) ¶ 22,857, at 22,543–44 (1990).

The FTC issued a Statement Concerning Horizontal Mergers (*reprinted in* 4 Trade Reg. Rep. (CCH) ¶ 13,200) the same day as the 1982 Merger Guidelines were released, and (in § VI) it contained a rather different approach to market delineation. Consequently, the FTC was hesitant in adopting the Guidelines' approach. In *In re Hospital Corp. of Am.*, 106 F.T.C. 361, 466 (1985) and *In re Weyerhaeuser Co.*, 106 F.T.C. 172, 274 (1985), the FTC endorsed the basic idea of the Guidelines' approach—the linkage between markets and market power. In *B.F. Goodrich Co.*, 110 F.T.C. 207, 289–90 (1988), the FTC quoted the Guidelines' test for market delineation but did not adopt it over alternative formulations.

538. BUREAU OF COMPETITION POLICY (Canada), MERGER ENFORCEMENT GUIDELINES pt. 3 (March 1991).

539. Sims & Blumenthal, *supra* note 496, at 17.

540. For such a review, see Gregory J. Werden & Luke M. Froeb, *Correlation, Causality, and All that Jazz: The Inherent Shortcomings of Price Tests for Antitrust Market Delineation*, 8 REV. INDUS. ORGANIZATION 329 (1993); Werden, *supra* note 443.

541. These points are elaborated by Froeb & Werden, *supra* note 493, at 38–40. As it happens, the pre-1984 data yield estimates similar to those based on post-1984 data. Werden & Froeb, *supra* note 540, at 345–46.

dict the behavior of consumers at relative price levels significantly different from those prevailing in a given market. While there are statistical and other methods for making the extrapolation, they necessarily entail a substantial margin for error. Second, changes in important underlying market conditions can undermine the relevance of historical data. Innovations in production technology, new product introductions, changes in input prices, and a host of other factors may make past consumer choices poor predictors of future consumer choices. The *Archer-Daniels-Midland* case provides an illustration. The HFCS industry changed considerably between the filing of the complaint and the filing of motions for summary judgment on market delineation, so the available data at the time of the motions might have presented a misleading picture.⁵⁴²

C. Shipments Tests

The first empirical method for market delineation to be extensively discussed and applied in the antitrust context is the Elzinga-Hogarty test.⁵⁴³ It delineates the geographic boundaries of markets on the basis of two percentages—LIFO (“little in from outside”) and LOFI (“little out from inside”). Both percentages are calculated by division, with the numerator being the quantity of the relevant product both produced and consumed within the candidate market. The denominator for the LIFO percentage is the quantity of the relevant product that is consumed in the candidate market, from whatever source, and the denominator for the LOFI percentage is the quantity of the relevant product that is produced in the candidate market, whatever the point of consumption. Under the Elzinga-Hogarty test, a candidate market is deemed to be a market only if the LIFO and LOFI percentages exceed particular thresholds; that is, only if the area has relatively little imports and relatively little exports. Elzinga and Hogarty originally suggested cutoffs of at least seventy-five percent for both percentages.⁵⁴⁴ Later they preferred a ninety-percent cutoff for the average of the two percentages.⁵⁴⁵

542. See *supra* text accompanying notes 498–502.

543. The test was first proposed and applied by Elzinga & Hogarty, *supra* note 15. The test was refined and reapplied by Elzinga & Hogarty, *supra* note 425.

In a personal communication, Morris Adelman informed me that he advocated the test now known as the Elzinga-Hogarty test while working on the *Pabst Brewing* case. Brief for Appellee at 16, 24, *United States v. Pabst Brewing Co.*, 384 U.S. 546 (1966) (No. 404) does suggest the test and presents a data table like that used to apply the test.

544. See Elzinga & Hogarty, *supra* note 15, at 73–75.

545. See Elzinga & Hogarty, *supra* note 425, at 2.

The Elzinga-Hogarty test has been applied in numerous antitrust cases, but has not generally been relied on by the courts.⁵⁴⁶ The test is now particularly popular for hospital mergers,⁵⁴⁷ and has been relied on in that context to some extent by both the FTC⁵⁴⁸ and the courts.⁵⁴⁹

Shipments data certainly can be of value in delineating markets, particularly as a first cut. Moreover, the fact that an area has significant imports suggests that local production is insufficient to satisfy local consumption and it relies on imports for the balance. If that is the case, the area is smaller than the relevant market. An area also cannot be a relevant market if transportation costs are so low that sellers outside the area can sell there with no significant locational disadvantage. Imports may be due to very low transportation costs. On the other hand, the absence of imports into, and exports from, an area does not indicate that local sellers could exercise market power. Imports could flood into the area as soon as price is increased a small amount.

The existence of significant exports from an area also does not imply that the area is not a relevant market. For example, sellers in a particular area may make substantial exports to points at which local sellers have a significant production cost disadvantage. It is quite plausible under these circumstances that a monopoly over the particular area would raise the price significantly even though exports would fall, perhaps to zero. The cost advantage would protect local sales from import competition, and the extra profit on local sales may more than offset the lost profit on the foregone exports.⁵⁵⁰ The analysis is similar for an area producing a higher quality product than sellers in areas to which it exports.⁵⁵¹ Thus, relevant markets actually may be far larger or smaller than they would appear under the Elzinga-Hogarty test.

D. Price Tests

Prices within a market are closely linked by arbitrage possibilities, so they will move toward equality and will tend to move together. On this

546. See *White & White, Inc.*, 540 F. Supp. at 992-93.

547. The test was advocated in that context by Michael A. Morrissey et al., *Defining Geographic Markets for Hospital Mergers*, 51 LAW & CONTEMP. PROBS. 165 (1988).

548. See *In re Hospital Corp. of Am.*, 106 F.T.C. 207, 396-97, 401-02 (1985) (initial decision); see also *id.* at 509 n.7 (opinion).

549. See, e.g., *United States v. Rockford Memorial Corp.*, 717 F. Supp. 1251, 1266-75 (N.D. Ill. 1989), *aff'd*, 898 F.2d 1278 (7th Cir.), *cert. denied*, 498 U.S. 920 (1990).

550. See Werden, *supra* note 443, at 727-30, for both a theoretical and actual example.

551. See Gregory J. Werden, *The Limited Relevance of Patient Migration Data in Market Delineation for Hospital Merger Cases*, 8 J. HEALTH ECON. 363 (1989).

basis, classical economists offered a definition of the term "market,"⁵⁵² and over the past decade many economists have explored ways in which to apply this definition in the antitrust context. Some of the proposed tests are based on price equality,⁵⁵³ but tests based on similarities of price movements have been more popular.

George Stigler and Robert Sherwin proposed that "the similarity of price movements" as measured by some form of price correlation be the test for market delineation in both product and geographic space. In illustrating their proposal, Stigler and Sherwin correlated price data itself, data on the logarithms of prices, and data on price changes. However, they did not propose a criterion for determining when a correlation was large enough to place two products in the same markets.⁵⁵⁴ Price correlations have been used in several cases, although not ultimately relied upon by the courts.⁵⁵⁵

Price correlation evidence can be of interest in market delineation, but neither the presence nor the absence of a high price correlation is dispositive. High price correlations may be induced by common influences, such as trends (including trends from mere inflation) and especially common costs. Particularly in the context of the delineation of geographic market boundaries, prices often would be highly correlated even if two regions were separate markets. The reason is that many of the same cost factors determine prices in both areas. A good illustration is petroleum products. Retail gasoline prices in two distant cities are likely to be highly correlated

552. See *supra* notes 11-13 and accompanying text. It should be observed that arbitrage will hold prices within limits even for products not in the same market; it is just a matter of degree. Thus, to make this definition implementable it is necessary to specify how closely arbitrage must hold prices together. For empirical implementation along these lines not intended for use in antitrust, see Spiller & Huang, *supra* note 445.

553. For empirical methods based on price equality, see Horowitz, *supra* note 447; Stephen A. Mathis et al., *An Approach to the Delineation of Rural Banking Markets*, 60 AM. J. AGRIC. ECON. 601 (1978). For critiques of these methods, see Werden & Froeb, *supra* note 540, at 338-41.

554. See Stigler & Sherwin, *supra* note 15. They certainly were not the first to have the idea. The underlying notion that movements in the price of a product will induce corresponding price movements for substitutes traces back at least to W. STANLEY JEVONS, *THE PRINCIPLES OF ECONOMICS* 148-49 (1905). An early proponent of the use of price correlations in an antitrust context was Frank J. Kottke, *Simultaneous Price Fluctuations as a Test of the Significance of Product Substitution*, 5 ANTITRUST BULL. 627 (1960). 2 AREEDA & TURNER, *supra* note 90, at 351-57 advocate reliance, though not exclusive reliance, on price correlations.

555. In one merger case in which George Stigler testified as an expert, he based market delineation conclusions on price correlations, and the court rejected his position. *Marathon Oil Co. v. Mobil Corp.*, 530 F. Supp. 315, 322 (N.D. Ohio 1981), *aff'd*, 669 F.2d 378, 380-81 (6th Cir. 1981). In another notable case, defendants relied in part on price correlations, and the district court agreed. The court of appeals, however, reversed. *United States v. Archer-Daniels-Midland Co.*, 866 F.2d 242, 243 (8th Cir. 1988), *cert. denied*, 493 U.S. 809 (1989); see also cases cited *supra* note 378 and accompanying text.

because they respond to world crude oil price shocks, yet the two cities could not possibly be in the same relevant market for gasoline retailing.⁵⁵⁶

In addition, the prices of two products can have a very low correlation because the two products are not good substitutes at current prices, but the attempted exercise of market power over one may fail nevertheless because a small price increase would make the products good substitutes. Perhaps more importantly, good substitutes at current prices can have a low price correlation if elasticities of supply are high and common influences do not induce a correlation. A high supply elasticity prevents a high elasticity of demand from inducing a high price correlation. As the price of one product rises, many consumers may switch to another, reflecting the high elasticity of demand, but if the elasticity of supply for the second product is high, little movement in price will result. If supply is completely elastic, the price correlation will be zero. Low elasticities of supply for substitutes tend to inflate price correlations, but they also enhance market power in the candidate market by limiting the ability of the substitutes to accommodate the increased demand when a price increase in the candidate market leads to substitution. Thus, it can work out that price correlations are high when products are not in the same market and low when products are in the same market.⁵⁵⁷

Price correlations involve the use of the most elementary of statistical techniques. More sophisticated techniques can be, and have been, used as well.⁵⁵⁸ In a nutshell, these techniques consider not just whether the prices of two products move together, but whether, over time, the prices of either product help explain those of the other. The problems with these

556. The fact that prices may be highly correlated because of common influences has often been noted in the literature. See, e.g., 2 AREEDA & TURNER, *supra* note 90, at 353; JONATHAN B. BAKER, WHY PRICE CORRELATIONS DO NOT DEFINE ANTITRUST MARKETS: ON ECONOMETRIC ALGORITHMS FOR MARKET DEFINITION 37 (Bureau of Economics, Federal Trade Comm'n Working Paper No. 149, 1987); SHELDON KIMMEL, PRICE CORRELATION AND MARKET DEFINITION 6 (Antitrust Division, U.S. Dep't of Justice, Economic Analysis Group Discussion Paper, EAG 87-8, 1987). The specific problem of common costs is emphasized by Werden & Froeb, *supra* note 540.

557. See Werden & Froeb, *supra* note 540, at 332-38 (forthcoming 1993).

558. See Phillip A. Cartwright et al., *Price Correlation and Granger Causality Tests for Market Definition*, 4 REV. INDUS. ORGANIZATION 79 (1989); Chris Klein et al., *A Note on Defining Geographic Markets*, 15 REGIONAL SCI. & URB. ECON. 109 (1985); Margaret E. Slade, *Exogeneity Tests of Market Boundaries Applied to Petroleum Products*, 34 J. INDUS. ECON. 291 (1986); Noel D. Uri & Edward J. Rifkin, *Geographic Markets, Causality and Railroad Deregulation*, 67 REV. ECON. & STAT. 422 (1985); Noel D. Uri et al., *On Defining Geographic Markets*, 17 APPLIED ECON. 959 (1985).

techniques, however, are essentially, the same as those with simple correlations.⁵⁵⁹

E. Residual Demand Estimation

A final empirical method worthy of note is residual demand estimation.⁵⁶⁰ The conventional demand curve used in economic analysis indicates the amount consumers are willing to purchase at various prices, holding the prices of all other products constant. A residual demand curve indicates the amount consumers are willing to purchase at various prices, with the prices of all other products adjusting in accord with prevailing economic forces to the various prices of the product for which the demand curve is constructed. Arguably, residual demand elasticities are the more relevant ones in assessing issues relating to market power, and they also turn out to be easier to estimate.⁵⁶¹

Residual demand estimation provides an estimate of the elasticity of demand that would be faced by a hypothetical monopolist over a candidate market. While the elasticity of demand alone is not sufficient for market delineation, it can be used along with other information to estimate the amount by which the hypothetical monopolist would increase price.⁵⁶² While this technique has considerable merit, it is not without serious limitations as well. These limitations include the problem of extrapolation discussed above, and technical problems in constructing reliable estimates.⁵⁶³

The most important limitation may be that there is a tendency to overestimate the extent by which a hypothetical monopolist actually would raise price. The problem is the mirror image of the *Cellophane* fallacy and has been termed the "reverse *Cellophane* fallacy."⁵⁶⁴ The amount by which a hypothetical monopolist over the candidate market would raise price is determined not by the demand elasticity at the competitive or prevailing price, but rather by the elasticity of demand at the monopoly price. On the other

559. See Werden & Froeb, *supra* note 540, at 341-44.

560. Jonathan B. Baker & Timothy F. Bresnahan, *The Gains from Merger or Collusion in Product-Differentiated Industries*, 33 J. INDUS. ECON. 427 (1985). The technique was developed by Baker and Bresnahan but was first applied to the problem of market delineation by Scheffman and Spiller. Scheffman & Spiller, *supra* note 445.

561. See Froeb & Werden, *supra* note 493, at 34-35. The 1992 Guidelines specify that the market delineation exercise is to be performed "assuming the terms of sale of all other products are held constant." 1992 Merger Guidelines, *supra* note 7, § 1.0. Since price is a term of sale, this provision would appear to preclude the use of residual demand estimation for market delineation.

562. See Froeb & Werden, *supra* note 493, at 35-36.

563. See *id.* at 38-46.

564. See Luke M. Froeb & Gregory J. Werden, *The Reverse Cellophane Fallacy in Market Delineation*, 7 REV. INDUS. ORGANIZATION 241 (1992).

hand, all that can be reliably estimated are elasticities of demand at prevailing prices. If estimated elasticities are used to infer amounts by which hypothetical monopolists would raise price, a significant overestimate is likely, resulting in overly narrow markets. The reason is that there is a tendency for demand to be more elastic at higher prices. The potential error is quite substantial if a price increase would cause one or more products to become good substitutes.⁵⁶⁵

CONCLUSION

The history of market delineation continues to be made, so there can be no real conclusion. I simply offer three interesting perspectives on history. President Truman was reported to have said: "The only new thing in the world is the history you don't know."⁵⁶⁶ Sir Walter Scott wrote: "A lawyer without history or literature is a mechanic, or mere mason; if he possesses some knowledge of these, he may venture to call himself an architect."⁵⁶⁷ In an interview Henry Ford is reported to have said: "History is more or less bunk."⁵⁶⁸ Perhaps they were all right.

565. For an example of the phenomenon from an actual antitrust case, see *id.* at 243-46.

566. JOHN BARTLETT, *FAMILIAR QUOTATIONS* 655 (16th ed. 1992) (citing MARK MILLER, *PLAIN SPEAKING: AN ORAL BIOGRAPHY OF HARRY S. TRUMAN* (1974)).

567. *Quoted in id.* at 379 (from GUY MANNERIN (1815)).

568. *Quoted in id.* at 499 n.2 (interview with Charles N. Wheeler, CHI. TRIB., May 25, 1916).

